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Using the Multicast Special Entitlement

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I've received a number of requests for help from folks who've been granted access to the multicast special entitlement (com.apple.developer.networking.multicast) but are having problems actually enabling it in their project. I wrote

Greetings All

up some instructions for doing this and I'm sharing them here for the benefit of all.

There are actually two processes involved here: • In the new process you add the Multicast Networking capability to your App ID and then create a provisioning profile

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- based on that. • In the old process you add extra entitlements to the provisioning profile's allowlist in an Additional Entitlements step.
- Note Almost everyone should be using the new process, but I've left the old process post in place just in case there's still a few old process folks around. It also makes a good reference for folks who are using other special entitlements, ones that

If you have follow-up questions about this, please put them in a new thread here on DevForums and tag it with both Network

and Entitlements.

Each process is covered in a follow-up post below.

Quinn "The Eskimo!" @ Developer Technical Support @ Apple let myEmail = "eskimo" + "1" + "@apple.com"

Change history: • 30 Sep 2020 — First posted.

• 6 Oct 2020 — Made minor tweaks to the No Additional Entitlements Page section. • 8 Oct 2020 — Expanded to cover the new process.

- 17 Mar 2021 Clarified why I've left the Old Process post in place. Rewrote the New Process post to use automatic code signing.
- Entitlements Network

New Process

project. The following sections described each of those steps in detail. IMPORTANT These instructions assume you're building a typical app using Xcode using automatic code signing. Special

Apple Recommended Answer



entitlements issued via the new process are compatible with manual code signing but I don't cover those details. **Note** These instructions were written for Xcode 12.4, iOS 14.4, and the developer web site at the time of publication.

permissions. 2. Go to the Account page on the developer web site. Pull down the menu at the top right and confirm that you're logged in to the right team. Adopt an Explicit App ID

1. Make sure you have permission to create App IDs and provisioning profiles. If not, you'll need to coordinate with the

folks on your team who do. See App Store Connect Help > Role permissions for more information about roles and

you'll see an App ID field whose value is * if you're using a wildcard App ID or your bundle ID if you're using an explicit App ID.

Groups capability. Xcode responds to this by creating an explicit App ID for your app. If you have no use for App Groups, you can just remove the capability afterwards; the explicit App ID will 'stick'.

The next step is to enable the entitlement in your project:

<key>com.apple.developer.networking.multicast</key>

Configure Your App ID

Enable the Entitlement

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2. On the Edit Your App ID Configuration page, scroll to the bottom to the Additional Capabilities section. Enable the Multicast Networking capability. If you don't see that capability, see No Multicast Networking Capability below. 4. Click Save.

1. In your app's <code>.entitlements</code> file, add a <code>com.apple.developer.networking.multicast</code> entry with a Boolean value of true. 2. When you do this Xcode will notice that you're using an entitlement that's not in the current provisioning profile's

<true/> 5 ... 6 % security cms -D -i /path/to/your.app/embedded.mobileprovision | grep -A 1 "com.apple.developer.networking.multicast"

No Multicast Networking Capability If, in step 3 of *Configure Your App ID*, you don't see the Multicast Networking capability, check the following: • That you're not set up to use the old process, as described in the *Old Process* post below. If you are, follow those instructions instead.

Before creating your profile, you must prepare the ground:

Go to the Account page on the developer web site.

To create a provisioning profile that allows the multicast special entitlement:

Select the certificates and devices as you would for any other profile.

To use the multicast special entitlement (com.apple.developer.networking.multicast) you must manually create a provisioning profile that allows that entitlement, then configure your app's target to use that profile, then actually enable the entitlement. The following sections described each of those steps in detail.

IMPORTANT These instructions assume you're building a typical app using Xcode. This will switch your app to use manual

1. Make sure you have permission to create provisioning profiles. If not, you'll need to coordinate with the folks on your

team who do. See App Store Connect Help > Role permissions for more information about roles and permissions.

If your app does not already have an explicit App ID, create one for it. See Developer Account Help > Register an App

Note These instructions were written for Xcode 12.0, iOS 14.0, and the developer web site at the time of publication.

Pull down the menu at the top right and confirm that you're logged in to the right team.

code signing. Special entitlements are not compatible with automatic code signing.

Replies

ID for instructions. **Create a Provisioning Profile**

9. Click Download.

Preparatory Work

Old Process

On the left, click Profiles. Click the add (+) button at the top. Select iOS App Development and click Continue (you can repeat this process for a distribution profile later on). Select your App ID and click Continue.

7. You'll now find yourself on the Additional Entitlements page. Select Multicast Networking from the popup and click

Continue. If you don't see the Additional Entitlements page, see No Additional Entitlements Page below.

1. In the Account page on the developer web site, navigate to the Certificates, Identifiers & Profiles section.

- 2. Drop it on to Xcode. In the project editor, select your target on the left. 4. Switch to the Signing & Capabilities tab. Disable "Automatically manage signing".
 - % codesign -d --entitlements :- /path/to/your.app | grep -A 1 "com.apple.developer.networking.multicast"

<key>com.apple.developer.networking.multicast</key>

No Additional Entitlements Page

4. Still in Terminal, run the following command to confirm that your profile allows use of the entitlement:

% security cms -D -i /path/to/your.app/embedded.mobileprovision | grep -A 1

If, in step 7 of *Create a Provisioning Profile*, you don't see the Additional Entitlements page, check the following:

• That you chose to create an iOS App Development profile (step 4 of *Create a Provisioning Profile*).

If this doesn't help, wait a few days and try again. It can take time for this access to propagate through our systems.

• That you're not set up to use the new process, as described in the New Process post above. If you are, follow those

• That you're logged in to the right team (step 3 of *Preparatory Work*). This is the most common cause of this problem.

If you still can't get it working, run through the process again taking a screen shot at each step. Then get back in touch with

us by replying to the email that notified you of your request's approval, making sure to include your follow-up number in the

Posted 5 months ago by eskimo 🗯 🚹 **New Process**

To use the multicast special entitlement (com.apple.developer.networking.multicast) first ensure that you have an

explicit App ID, then enable the Multicast Networking capability on that App ID, and finally enable the entitlement in your

IMPORTANT These instructions assume you're building a typical app using Xcode using automatic code signing. Special

entitlements issued via the new process are compatible with manual code signing but I don't cover those details.

Pull down the menu at the top right and confirm that you're logged in to the right team.

Once you have an explicit App ID, it's time to enable the Multicast Networking capability on it. To do this:

2. On the Edit Your App ID Configuration page, scroll to the bottom to the Additional Capabilities section.

Note These instructions were written for Xcode 12.4, iOS 14.4, and the developer web site at the time of publication.

project. The following sections described each of those steps in detail.

Before getting started, you must prepare the ground:

2. Go to the Account page on the developer web site.

To determine whether your app already has an explicit App ID:

If you're using a wildcard App ID you must switch to using an explicit one. The easiest way to do this is to add the App Groups capability. Xcode responds to this by creating an explicit App ID for your app. If you have no use for App Groups, you can just remove the capability afterwards; the explicit App ID will 'stick'.

Build your app for the device (not the simulator!). In Terminal, run the first command below to confirm that your app was signed with the entitlement. Still in Terminal, run the second command below to confirm that your profile allows use of the entitlement. 1% codesign -d --entitlements :- /path/to/your.app | grep -A 1 "com.apple.developer.networking.multicast"

<true/>

Agreement.

iOS

tvOS

Games

Business

Education

Safari and Web

<true/> 10 ...

"com.apple.developer.networking.multicast"

<key>com.apple.developer.networking.multicast</key>

<key>com.apple.developer.networking.multicast</key>

6 % security cms -D -i /path/to/your.app/embedded.mobileprovision | grep -A 1

If you still can't get it working, run through the process again taking a screen shot at each step. Then get back in touch with us by replying to the email that notified you of your request's approval, making sure to include your follow-up number in the response.

If this doesn't help, wait a few days and try again. It can take time for this access to propagate through our systems.

- Posted 1 week ago by eskimo

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require the old process.

Share and Enjoy

Reply to this question

To use the multicast special entitlement (com.apple.developer.networking.multicast) first ensure that you have an explicit App ID, then enable the Multicast Networking capability on that App ID, and finally enable the entitlement in your

Preparatory Work Before getting started, you must prepare the ground:

To determine whether your app already has an explicit App ID: 1. In Xcode, go to the Signing & Capabilities editor. 2. The Provision Profile field should say Xcode Managed Profile. Click the little info button next to that. In the popup

1. On the developer web site, edit your App ID's capabilities using the process described in Developer Account Help > Enable app capabilities.

Once you have an explicit App ID, it's time to enable the Multicast Networking capability on it. To do this:

If you're using a wildcard App ID you must switch to using an explicit one. The easiest way to do this is to add the App

allowlist but is in your App ID's allowlist. It responds to this by rebuilding the provisioning profile. Build your app for the device (not the simulator!). In Terminal, run the first command below to confirm that your app was signed with the entitlement.

1 % codesign -d --entitlements :- /path/to/your.app | grep -A 1 "com.apple.developer.networking.multicast"

Still in Terminal, run the second command below to confirm that your profile allows use of the entitlement.

- <key>com.apple.developer.networking.multicast</key> <true/>
- That you're logged in to the right team (step 3 of *Preparatory Work*). This is the most common cause of this problem. If this doesn't help, wait a few days and try again. It can take time for this access to propagate through our systems. If you still can't get it working, run through the process again taking a screen shot at each step. Then get back in touch with us by replying to the email that notified you of your request's approval, making sure to include your follow-up number in the response.

Posted 1 week ago by eskimo

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Configure Your Target To configure your app's target to use the profile:

Give the profile a name and click Continue.

1. Locate the dowloaded profile in the Finder.

To enable the entitlement in your app:

<true/>

instructions instead.

Preparatory Work

permissions.

Adopt an Explicit App ID

Configure Your App ID

Enable app capabilities.

Enable the Entitlement

below.

4. Click Save.

response.

value of true.

Select your profile from the Provisioning Profile popup. **Enable the Entitlement**

1. In your app's **_entitlements** file, add a **com_apple_developer_networking_multicast** entry with a Boolean

In Terminal, run the following command to confirm that your app was signed with the entitlement:

Build your app for the device (not the simulator!).

<key>com.apple.developer.networking.multicast</key> <true/>

"com.apple.developer.networking.multicast"

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1. On the developer web site, edit your App ID's capabilities using the process described in Developer Account Help >

Enable the Multicast Networking capability. If you don't see that capability, see No Multicast Networking Capability

1. Make sure you have permission to create App IDs and provisioning profiles. If not, you'll need to coordinate with the

folks on your team who do. See App Store Connect Help > Role permissions for more information about roles and

value of true. 2. When you do this Xcode will notice that you're using an entitlement that's not in the current provisioning profile's allowlist but is in your App ID's allowlist. It responds to this by rebuilding the provisioning profile.

The next step is to enable the entitlement in your project:

No Multicast Networking Capability

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Accessibility

Accessories

Asked 5 months ago by eskimo

The skimo

The skimo

Account

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1. In your app's entitlements file, add a com.apple.developer.networking.multicast entry with a Boolean

If, in step 3 of Configure Your App ID, you don't see the Multicast Networking capability, check the following: That you're not set up to use the old process, as described in the *Old Process* post below. If you are, follow those instructions instead.

• That you're logged in to the right team (step 3 of *Preparatory Work*). This is the most common cause of this problem.

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