



# iPhone Application Programming

## Lab 1: Provisioning Profiles

### Walkthrough

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<http://hci.rwth-aachen.de/iphone>

# Provisioning Profiles and other evils

- iOS Devices allow only audited apps, no arbitrary code execution
- Therefore, developers have to register a [whitelist of people](#) and [whitelist of devices](#) which are allowed to run a [whitelist of custom apps](#)
- Not needed for the Simulator
- And students of this class have to jump through these hoops as well
  - Step 1: You'll need to join the RWTH dev team with your Apple ID

# What is a Provisioning Profile?

- Provisioning Profile = ( Set of Developers, Set of Devices, Set of Apps )
- Configure in Member Center
- Also a file on the developer's Mac and iOS Devices
  - Xcode Organizer → Devices
  - iOS Settings → General → Profiles



Name:

Type: Development

App ID:

Certificates:  Select All 33 of 33 items

- Philipp Koulen (iOS Development)
- Thomas Müller (iOS Development)
- Lukas Szychalski (iOS Development)
- nourhan abdelhalim (iOS Development)
- Sebastian Moreno (iOS Development)
- Matthias Ewert (iOS Development)

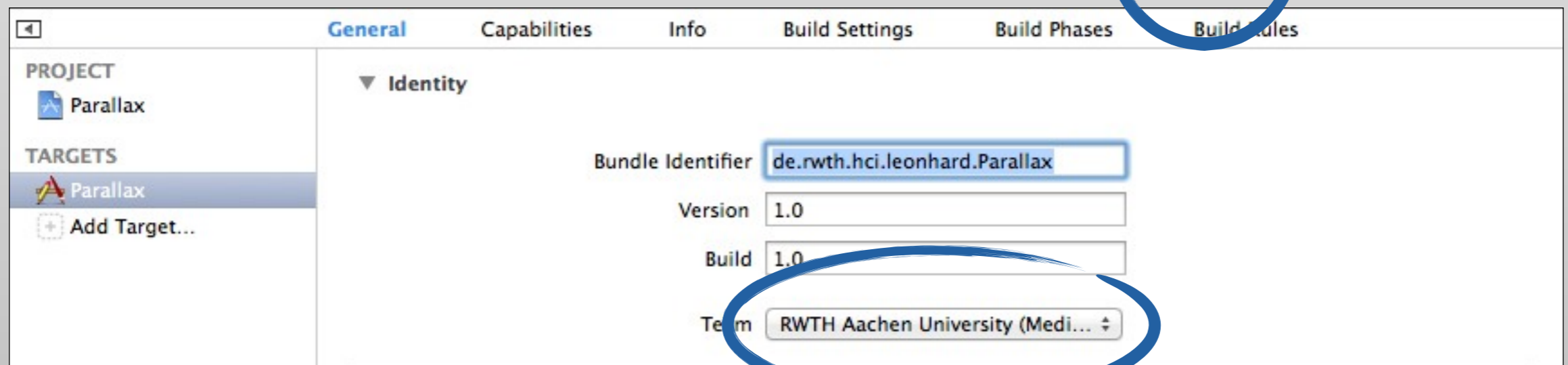
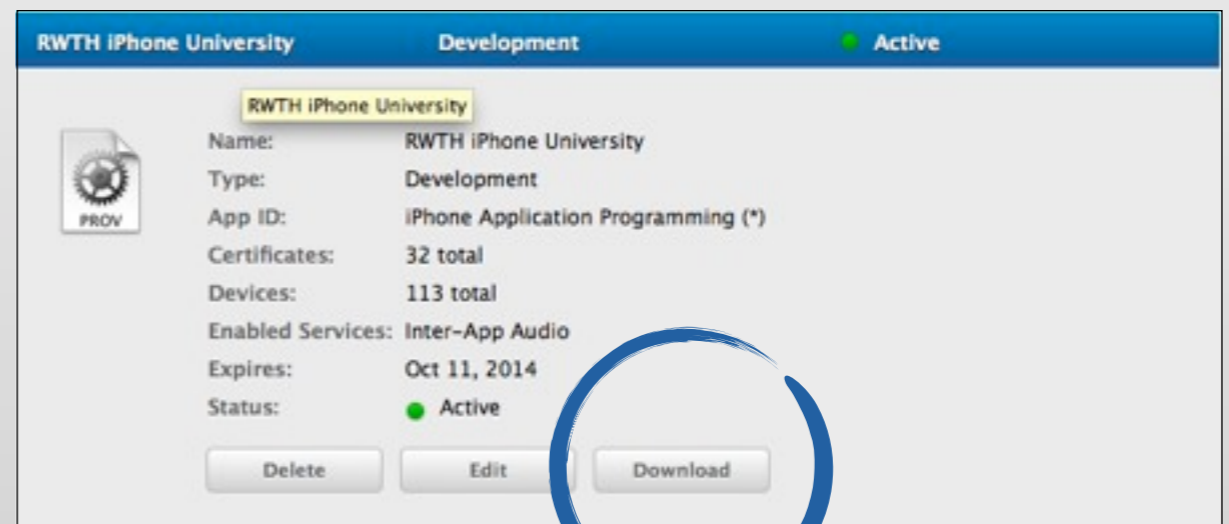
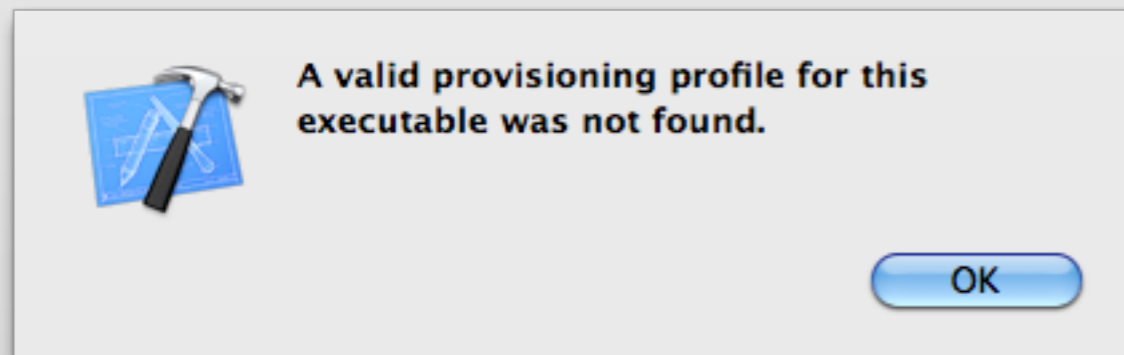
Devices:  Select All 116 of 116 items

- AVMZ iPad
- AVMZ iPad Liza
- AVMZ iPad Maddin
- AVMZ iPod
- Ahsan Nazir iPhone 1
- Ahsan Nazir iPhone 2

# Troubleshooting Provisioning Profiles

➔ Does Xcode know about the provisioning profile?

- ✓ “No provisioning profile found”
- ✓ Xcode can download it automatically (if you selected the team in the build settings)
- ✓ or download “RWTH iPhone University” from member center and drag on Xcode

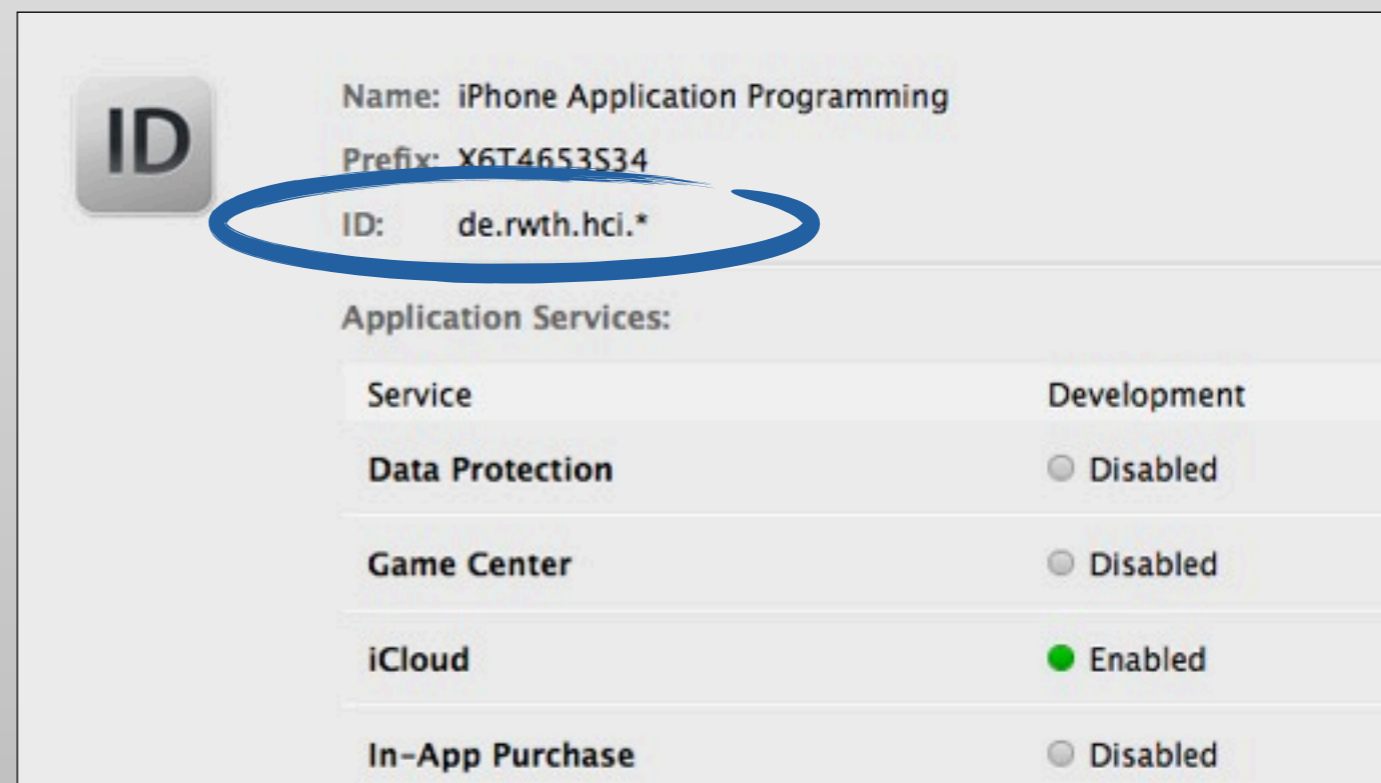


# How are Apps identified?

- App identifier is a unique identifier of your choosing for each app
- e.g., `de.rwth.hci.leonhard.Parallax`
- In Info.plist of the App

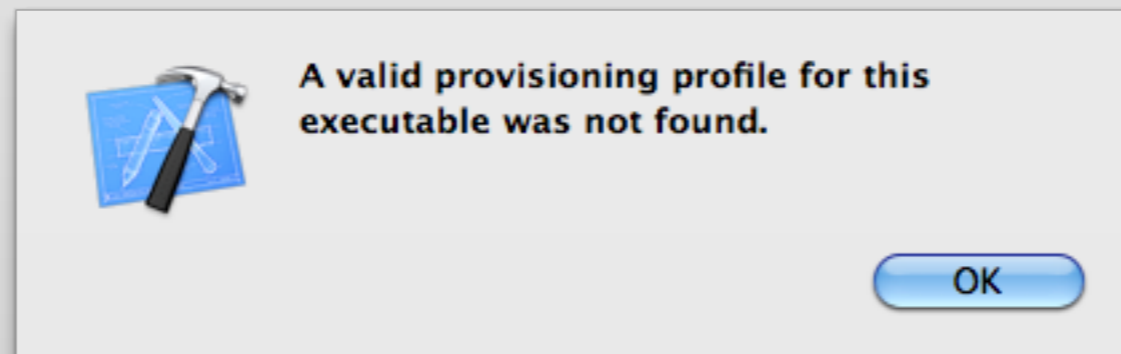
Key	Type	Value
▼ Information Property List	Dictionary	(14 items)
Bundle identifier	String	de.rwth.hci.leonhard.Parallax
Localization native development r...	String	en
Bundle display name	String	#{PRODUCT_NAME}

- In profile will look like this `X6T4653S34.de.rwth.hci.*`
  - Blurb at beginning is added by Apple
  - \* allows all strings
- Set permissions in member center



# Troubleshooting App Identifiers

- ➔ Does the provisioning profile whitelist your custom app identifier?
  - ✓ “No provisioning profile found”
  - ✓ Always use `de.rwth.hci.{something you like}`



# How are Devices identified?

- Each device has a unique identifier (UDID)
- View the UDID of your device in iTunes or Xcode → Organizer



- Each device that one wants to develop on needs to be added in the member center

The screenshot shows the 'iOS Devices' member center interface. At the top, it says 'You can register 78 additional devices.' Below this is a table with two columns: 'Name' and 'UDID'. The table contains five rows of device information.

Name	UDID
AVMZ iPad	bcc2e2756d7da4dd688c5ca4ee3355d5442b9e7a
AVMZ iPad Liza	7a6ddd8947b5153430522951c706be8f462a4477
AVMZ iPad Maddin	1613f9dc7eda8b406a5419b423bbdaf16a90e64
AVMZ iPod	8fcc5e1643fe6a3f40318b07ca784bcf5f9bc6ad

# Troubleshooting UDIDs

## ➔ Does the provisioning profile whitelist your device?

- ✓ We've added all devices we hand out
- ✓ Email us if you bring your own device so we can add it as well
- ✓ Inspect the profile in the member center and look for the UDID of your device

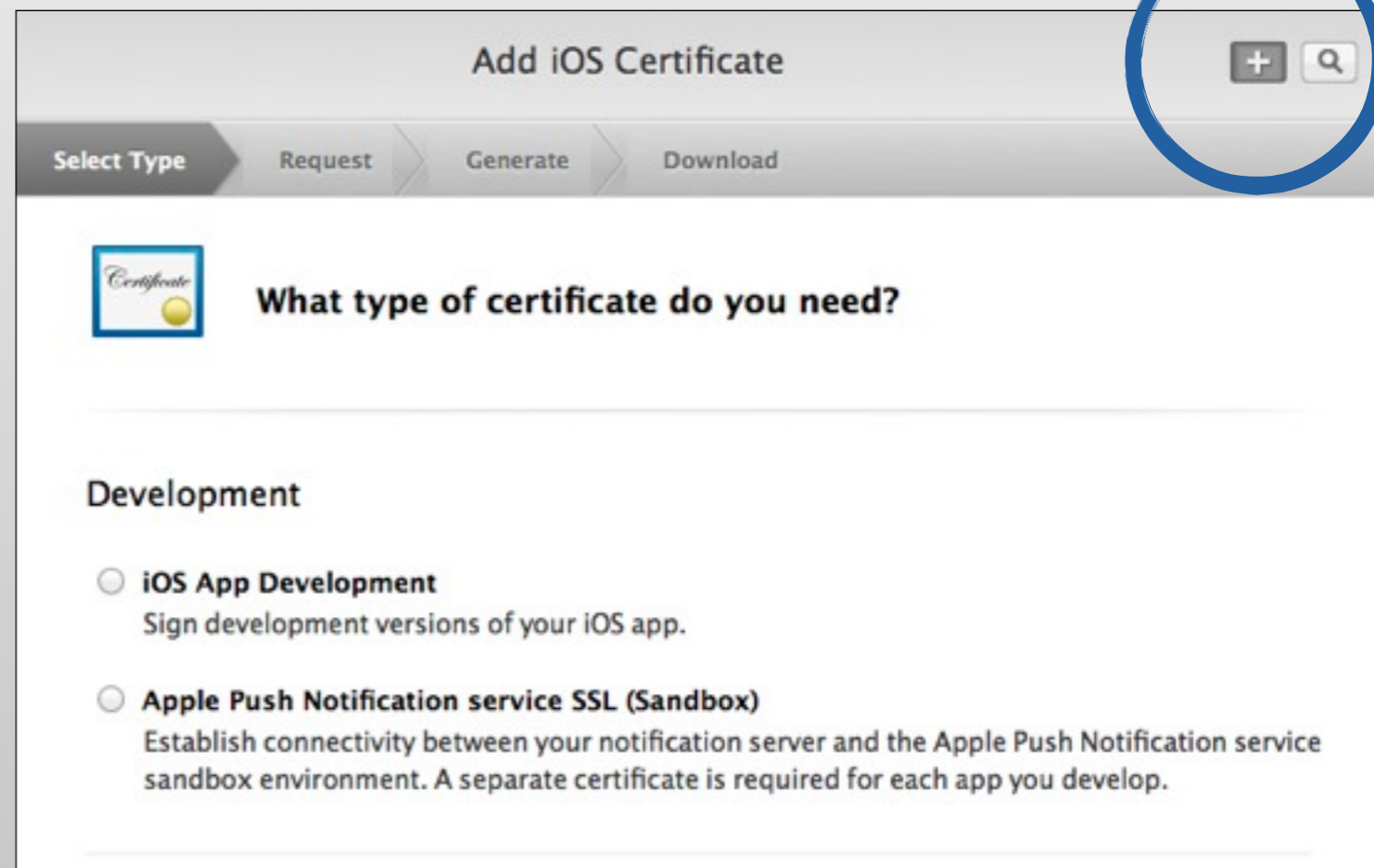




# How are Developers identified?

- You'll need a developer certificate for our team
- Create one in member center → Certificates, Identifiers & Profiles

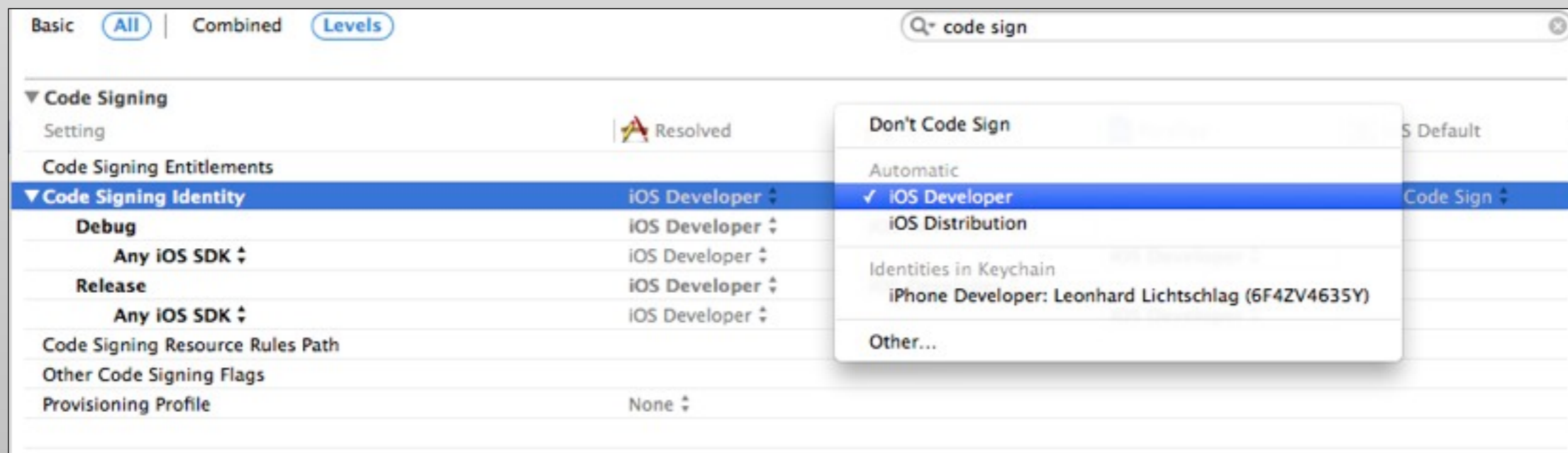
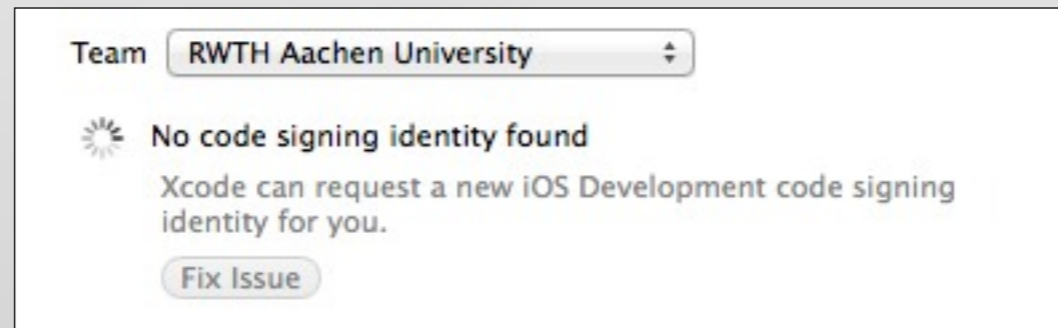
- Creates a file on your Mac / in your Keychain
- Export and backup



# Troubleshooting developer certificates

➔ Does the provisioning profile whitelist you?

- ✓ “No code signing identity found”
- ✓ Do you have a current developer certificate? No → create a new one.
- ✓ Does your computer know about it? No → Export it from your main machine *or* revoke and request a new one
- ✓ Inspect the profile in the member center and look for your name



## ➡ Does Xcode know about the provisioning profile?

- ✓ “No provisioning profile found”
- ✓ Xcode can download it automatically (if you selected the team in the build settings)
- ✓ *or* download “[RWTH iPhone University](#)” from member center and drag on Xcode

## ➡ Does the provisioning profile whitelist your custom app identifier?

- ✓ “No provisioning profile found”
- ✓ Always use [de.rwth.hci.{something you like}](#)

## ➡ Does the provisioning profile whitelist your device?

- ✓ Inspect the profile in the member center and look for the UDID of your device
- ✓ Email us if you bring your own device

## ➡ Does the provisioning profile whitelist you?

- ✓ “No developer identity found”
- ✓ Do you have a current developer certificate? No → create a new one.
- ✓ Does your computer know about it? No → Export it from Keychain
- ✓ Inspect the profile in the member center and look for your name

# Future

- Apps that use Apple server resources (Games, Push Notifications) need their own app identifier
- There are also Distribution and Testing profiles
- Identifiers for PassKit and Push Notifications similar in style to AppIDs
- Mac App Store works the same way but without device identifiers