

Ludovic Rousseau's blog

My activities related to smart card and Free Software (as in free speech).

Saturday, September 26, 2015

PCSC sample in Swift

To continue the list of PC/SC wrappers initiated in 2010 with "[PC/SC sample in different languages](#)" I now present a sample in [Swift](#) using the Apple Crypto Token Kit API.

Crypto Token Kit API

See my previous article "PCSC sample in Objective-C" to know more about Crypto Token Kit API.

Source code

Create a new Swift application in Xcode. You need to enable the App Sandbox and add/set the `com.apple.security.smartcard` entitlement to YES.

This code is just a, more or less direct, conversion of the Objective-C source code to Swift.

I used Xcode 7.0 that implements Swift version 2.1.

Swift is a language not yet known by my colorization tool: [source-highlight](#). The colors may not be great.

```
import CryptoTokenKit

let mngr = TKSmartCardSlotManager.defaultManager()

// Use the first reader/slot found
let slotName = mngr!.slotNames[0]
print("slotName:", slotName)

// connect to the slot
mngr?.getSlotWithName(slotName, reply: {
    (slot: TKSmartCardSlot?) in
        // connect to the card
        let card = slot?.makeSmartCard()
        if (card != nil)
        {
            // begin a session
            card?.beginSessionWithReply({
                (success: Bool, error: NSError?) in
                    if (success)
                    {
                        // send 1st APDU
                        let aid : [UInt8] = [0xA0, 0x00, 0x00, 0x00, 0x62, 0x03, 0x01, 0x0C, 0
x06, 0x01]

                        let data = NSData(bytes: aid, length: aid.count)
                        card?.sendIns(0xA4, p1: 0x04, p2: 0x00, data: data, le: 0, reply: {
                            (data: NSData?, sw: UInt16, error: NSError?) in
                                if (error != nil)
                                {
                                    print("sendIns error:", error!)
                                }
                                else
                                {
                                    print("Response:", data!, String(sw, radix: 16))

                                    // send 2nd APDU
                                    let data = NSData(bytes: nil, length: 0)
                                    card?.sendIns(0x00, p1: 0x00, p2: 0x00, data: data, le: 200, re
ply: {
                                        (data: NSData?, sw: UInt16, error: NSError?) in
```

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