

Ludovic Rousseau's blog

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

Tuesday, September 13, 2016

PC/SC sample in go

To continue the list of PC/SC wrappers initiated in 2010 with "[PC/SC sample in different languages](#)" I now present a sample in [go](#).

scard go wrapper

I used the [scard go wrapper](#) from Michael Gehring.

The github project does not provide any documentation. You can get *some* help from a previous project [go.pcsc-lite](#) also from Michael Gehring.

The scard wrapper API has a nice [godoc page](#).

Installation

The installation is quiet simple.

```
$ cd foobar
$ export GOPATH=$(pwd)

$ go get github.com/ebfe/scard
```

I used the default [golang-go](#) package on Debian stable (jessie 8.5).

```
$ go version
go version go1.3.3 linux/amd64
```

Sample source code

```
package main

import (
    "fmt"
    "github.com/ebfe/scard"
)

func main() {
    // Establish a PC/SC context
    context, err := scard.EstablishContext()
    if err != nil {
        fmt.Println("Error EstablishContext:", err)
        return
    }

    // Release the PC/SC context (when needed)
    defer context.Release()

    // List available readers
    readers, err := context.ListReaders()
    if err != nil {
        fmt.Println("Error ListReaders:", err)
        return
    }

    // Use the first reader
    reader := readers[0]
```

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```

fmt.Println("Using reader:", reader)

// Connect to the card
card, err := context.Connect(reader, scard.ShareShared, scard.ProtocolAny)
if err != nil {
    fmt.Println("Error Connect:", err)
    return
}

// Disconnect (when needed)
defer card.Disconnect(scard.LeaveCard)

// Send select APDU
var cmd_select = []byte{0x00, 0xa4, 0x04, 0x00, 0x0A, 0xA0,
0x00, 0x00, 0x00, 0x62, 0x03, 0x01, 0x0C, 0x06, 0x01}
rsp, err := card.Transmit(cmd_select)
if err != nil {
    fmt.Println("Error Transmit:", err)
    return
}
fmt.Println(rsp)

// Send command APDU
var cmd_command = []byte{0x00, 0x00, 0x00, 0x00}
rsp, err = card.Transmit(cmd_command)
if err != nil {
    fmt.Println("Error Transmit:", err)
    return
}
fmt.Println(rsp)
for i := 0; i < len(rsp)-2; i++ {
    fmt.Printf("%c", rsp[i])
}
fmt.Println()
}

```

Remarks

You can get another sample code [example_test.go](#) in the scard project. This sample code greatly helped me implement my own sample code.

Results

```

$ go run hello_world.go
Using reader: Gemalto PC Twin Reader (70D7E2EE) 00 00
[144 0]
[72 101 108 108 111 32 119 111 114 108 100 33 144 0]
Hello world!

```

Conclusion

The github project [scard](#) has no documentation or README file. After discussion with Michael Gehring it is on purpose.

This blog article should give more visibility to the project.



Labels: [code](#)

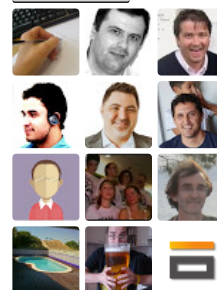
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