

# Cordova

## Install

Install nodejs and npm

```
sudo apt-get install nodejs npm
```

Install cordova

```
sudo npm install -g cordova
```

cordova need node and ubuntu install nodejs

```
sudo ln -s /usr/bin/nodejs /usr/local/bin/node
```

install cordova-browser from git to have linux support

```
sudo npm install -g git://git.apache.org/cordova-browser.git
```

## Update

```
sudo npm update -g
```

## Install Android SDK

Create `/etc/etcp/profile.d/android.sh` or add in `.bashprofile` `<code> export ANDROIDHOME=/lab/android-sdk-linux/ export PATH=$PATH:$ANDROIDHOME/tools:$ANDROIDHOME/platform-tools </code>`

## Project

### Create project

```
cordova create /lab/peper-memory org.csgalileo.peper.memory PeperMemory
```

Add android support

```
cd /lab/peper-memory
cordova platform list
cordova platforms add android
```

```
cordova platforms add browser

# temporary patch
# cp /usr/local/lib/node_modules/cordova-
browser/bin/templates/project/cordova/run ./platforms/browser/cordova/run
```

Add to platforms/browser/cordova/run

```
case 'linux':
    spawn('chromium-browser', ['--test-type', '--disable-web-security', '-
-user-data-dir=/tmp/temp_chrome_user_data_dir_for_cordova_browser',
project]);
    break;
```

## Crosswalk

Optionally it is possible to use crosswalk instead of android webview

Add android platform to project

```
cordova platforms add android
```

Download [<https://crosswalk-project.org/documentation/downloads.html>][crosswalk]

```
CROSSWALK=/lab/crosswalk/crosswalk-cordova-10.39.235.15-arm
rm -fR platforms/android/CordovaLib/*
cp -a ${CROSSWALK}/framework/* platforms/android/CordovaLib/
cp -a ${CROSSWALK}/VERSION platforms/android/
```

Add to platforms/android/AndroidManifest.xml

```
<uses-permission android:name="android.permission.ACCESS_WIFI_STATE" />
<uses-permission android:name="android.permission.ACCESS_NETWORK_STATE" />
```

Build both the CordovaLib and xwalkcorelibrary

```
cd platforms/android/CordovaLib/
android update project --subprojects --path . --target "android-19"
ant clean debug

cd .. # platforms/android/
rm -Rf ant-gen
rm -Rf ant-build
cd ../..
cordova build android
```

## Manage project

## View project detail

```
cordova info
```

## Add plugins

```
cordova plugin add org.apache.cordova.device
cordova plugin add org.apache.cordova.console

# cordova plugin add https://github.com/donaldp24/CanvasCameraPlugin.git &&
cordova prepare
```

## Search plugins

```
cordova plugin search <text>
```

## Update corbova inside project

```
cordova platform update android
```

## Test project

```
cordova emulate browser
```

## Release

```
cordova build --release android
```

[<http://developer.android.com/tools/publishing/app-signing.html> sign and align]

## Video autoplay

### Cordova

CordovaApp.java

```
super.init();
super.appView.getSettings().setMediaPlaybackRequiresUserGesture(false);
```

### Cordova Crosswalk

```
...
super.init();
getSettings(super.appView).setMediaPlaybackRequiresUserGesture(false);
```

```
...

/* rende pubblica la API mascherata dalle nuove release di crosswalk */
private XWalkSettings getSettings(XWalkView webView)
{
    try
    {
        Method __getBridge =
XWalkView.class.getDeclaredMethod("getBridge");
        __getBridge.setAccessible(true);
        XWalkViewBridge xWalkViewBridge = null;
        xWalkViewBridge = (XWalkViewBridge)__getBridge.invoke(webView);
        XWalkSettings xWalkSettings = xWalkViewBridge.getSettings();
        return xWalkSettings;
    }
    catch (Exception e)
    {
        e.printStackTrace();
    }
    return null;
}
```

Posizionare un set di src dopo il device ready

```
$('#video1')[0].src =
"http://192.168.2.125:8000/lib/exe/fetch.php?media=contrade:pergari:pergari_
int.webm";
```

## GPIO

jni contain NDK project

```
|— Android.mk
|— gpio.c
|— gpio.h
|— jni_gpio.c
```

Rebuild this project running 'ndk-build into jni folde'r

Android.mk

```
LOCAL_PATH := $(call my-dir)

include $(CLEAR_VARS)
LOCAL_MODULE := gpio_test
LOCAL_SRC_FILES := gpio.c
LOCAL_LDLIBS += -llog
LOCAL_CFLAGS += -DEXEC
```

```
include $(BUILD_EXECUTABLE)

include $(CLEAR_VARS)
LOCAL_MODULE := libgpio
LOCAL_SRC_FILES := gpio.c jni_gpio.c
LOCAL_LDLIBS += -llog
include $(BUILD_SHARED_LIBRARY)
```

## gpio.c

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <poll.h>
#include <fcntl.h>
#include <unistd.h>
#include <sys/stat.h>
#include <sys/types.h>

#include "gpio.h"

#define LOG_TAG "GPIO"

#ifdef EXEC
#include <android/log.h>
#define LOGD(...)
__android_log_print(ANDROID_LOG_DEBUG, LOG_TAG, __VA_ARGS__)
#else
#define LOGD(...) printf(">===< %s >===<
", LOG_TAG), printf(__VA_ARGS__), printf("\n")
#endif

void on_new_value(int val);
int read_gpio(char *path, void (*callback)(int));

int main(int argc, char **argv){
    LOGD("Hello!\n");
#ifdef HOST
    return 0;
#endif
    if(argc == 2)
        return read_gpio(argv[1], on_new_value);
    else
        LOGD("missing argument path");

    return -1;
}

int read_gpio(char *path, void (*callback)(int)){
    int fd = open(path, O_RDONLY);
```

```

char buf[11];
int res = 0;

if(fd == -1){
    perror("error opening file");
    return -1;
}

struct pollfd gpio_poll_fd = {
    .fd = fd,
    .events = POLLPRI,
    .revents = 0
};

for(;;){
    res = poll(&gpio_poll_fd,1,-1);
    if(res == -1){
        perror("error polling");
        break;
    }

    if((gpio_poll_fd.revents & POLLPRI) == POLLPRI){
        LOGD("POLLPRI");
        int off = lseek(fd, 0, SEEK_SET);
        if(off == -1) break;
        memset(&buf[0], 0, 11);
        size_t num = read(fd, &buf[0], 10*sizeof(char));
        callback(atoi(buf));
    }

    if((gpio_poll_fd.revents & POLLERR) == POLLERR){
        //seems always to be true ..
        //LOGD("POLLERR");
    }
}
return 0;
}

void on_new_value(int val){
    LOGD("interrupt received, val: %d", val);
}

```

gpio.h

```

#ifndef _GPIO_H_
#define _GPIO_H_
int read_gpio(char *path, void (*callback)(int));
#endif

```

*jnigpio.c* `<code> #include <jni.h> #include <stdlib.h> /* Header for class nativehelperNativeGpio / #include "gpio.h" #define LOGTAG "GPIO" #ifndef HOST #include <android/log.h> #define LOGD(...)`

```
androidLogprint(ANDROIDLOGDEBUG,LOGTAG,VAARGS) #else #define LOGD(...) printf(">==< %s
>==< ",LOGTAG),printf(VAARGS),printf("\n") #endif #ifndef _IncludednativehelperNativeGpio
#define _IncludednativehelperNativeGpio #endif #ifdef cplusplus extern "C" { #endif static void
onnewvalue(int val); static jmethodID cbmethodid; static jclass cbclass; static jobject cobject; static
JNIEnv csaveenv; /* Class: csgalileoNativeGpio * Method: readGpio * Signature:
(Ljava/lang/String;Lcsgalileo/NativeGpio/GpioInterruptCallback;)V / JNIEXPORT void JNICALL
JavacsgalileoNativeGpioReadGpio (JNIEnv env, jclass cls, jstring path, jobject callback){ cbclass =
(env)→GetObjectClass(env, callback); if(cbclass == NULL){ LOGD("callback interface not found");
return; } cbmethodid = (env)→GetMethodID(env, cbclass, "onNewValue", "(I)V"); if(cbmethodid ==
NULL){ LOGD("could not find callback method"); return; } cobject = callback; csaveenv = env;
const char *fname = (env)→GetStringUTFChars(env, path, NULL); LOGD("path is %s", fname);
readgpio((char *)fname, onnewvalue); (env)→ReleaseStringUTFChars(env, path, fname); } static void
onnewvalue(int val){ LOGD("onnewvalue interrupt received, val: %d", val);
(*csaveenv)→CallVoidMethod(csaveenv, cobject, cbmethodid, (jint)val); } #ifdef _cplusplus }
#endif </code>
```

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