Raspberry PI pour les agents secrets
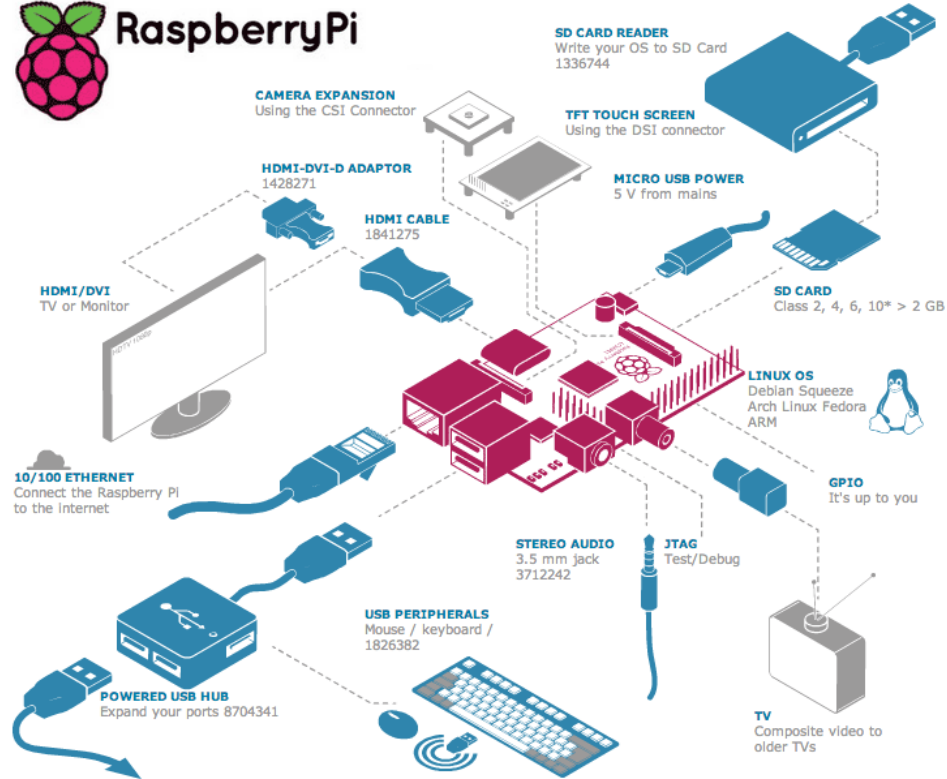
15 exemples d'utilisation

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/dev/var/4

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RPi

RaspberryPi

SD CARD READER
Write your OS to SD Card
1336744

CAMERA EXPANSION
Using the CSI Connector

TFT TOUCH SCREEN
Using the DSI connector

HDMI-DVI-D ADAPTOR
1428271

MICRO USB POWER
5 V from mains

HDMI CABLE
1841275

HDMI/DVI
TV or Monitor

SD CARD
Class 2, 4, 6, 10* > 2 GB

LINUX OS
Debian Squeeze
Arch Linux Fedora
ARM

10/100 ETHERNET
Connect the Raspberry Pi
to the internet

GPIO
It's up to you

STEREO AUDIO
3.5 mm jack
3712242

JTAG
Test/Debug

USB PERIPHERALS
Mouse / keyboard /
1826382

POWERED USB HUB
Expand your ports 8704341

TV
Composite video to
older TVs

Besoin d'un agent secret

- Communication avec M
- Obtenir l'information secrète
- Défendre ça propre information
- Combattre les ennemies
- Agents de deuxième plan
- Transport (voiture ultra hi-tech)
- Gadgets

Communication avec M

Talking to people from distance

- Microphone USB
- Casque
- SoX
  - sox -d -t sox - | ssh pi@[IP address] sox -q -t sox - -d

Voice transformation

- SoX
  - sox -t alsa plughw:1 -d reverb 99 50 0
    - Alpes : echo 0.8 0.9 1000 0.3
    - Sci-fi robot : flanger 30 10 0 100 10 tri 25 lin
    - Shtrumpf : pitch 500

Obtenir l'information secrète

Audio Recording

- SoX
  - alias record='sox -t alsa plughw:1 -t wav - | lame -'
  - record newrec.mp3
- tmux / screen
  - to not break the session

Audio Transmission

- Remote recording
  - ssh pi@[IP address] sox -t alsa plughw:1 -t wav - > ~/Desktop/myrec.wav
- Speak to people
  - sox -d -t sox - | ssh pi@[IP address] sox -q -t sox - -d

Recording the video stream

- VLC
  - vlc http://[IP address]:8080/?action=stream --sout='#standard{mux=avi,dst=/home/[username]/Desktop/myvideo.avi,access=file}'

Monitoring WiFi

- Kismet
  - Wi-Fi spectrum and traffic analyzer

Viewing Your webcam

- Video
  - vlc http://[IP address]:8080/?action=stream
- Audio
  - ssh pi@[IP-address] sox -t alsa plughw:1 -t sox - | sox -q -t sox - -d

Analyzing packet dumps

- logging
  - sudo ettercap -q -T -i wlan0 -M arp:remote -d -w mycapture.pcap /[Router IP]/ /[PC IP]/
- Analyzing
  - ssh pi@[IP address] cat /home/pi/kismetlogs/Kismet-XXXX.pcapdump | wireshark -k -i -

Défendre ça propre information

Protection against Ettercap

- static ARP entries
- ettercap
  - chk_poison plugin

Keeping data secret

- cryptsetup
  - crypted containers
- dosfstools
  - for Win compatibilty

Combattre les ennemies

Detecting an intruder

- Motion

Turning on and off a TV

- cron
- Motion

Staging a playback scare

- Assign to Motion

Traffic remplacement

● etterfilter

```
if (ip.proto == TCP && tcp.dst == 80) {
  if (search(DATA.data, "Accept-Encoding")) {
    replace("Accept-Encoding", "Accept-Mischief");
  }
}

if (ip.proto == TCP && tcp.src == 80) {
  if (search(DATA.data, "<img")) {
    replace("src=", "src=\"http://www.gnu.org/graphics/babies/
BabyGnuTux-Small.png\" ");
    replace("SRC=", "src=\"http://www.gnu.org/graphics/babies/
BabyGnuTux-Small.png\" ");
    msg("Mischief Managed!\n");
  }
}
```

Ennemies réels ?

Agents de deuxième plan

Transport (voiture ultra hi-tech)

RPi integration

GPS Tracking

- USB GPS receiver (projects verified with Columbus V-800)
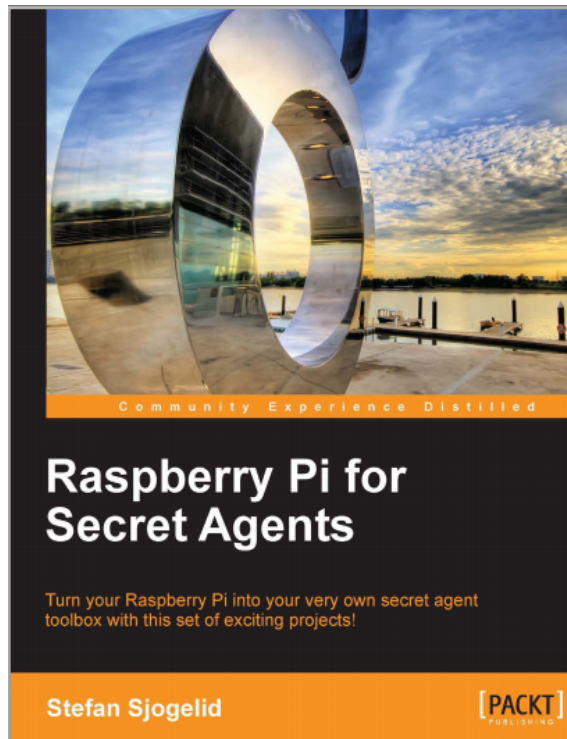- gpsd
- cgps

Gadgets

Controlling PI with Your smartphone

- NetIO
- SSH client
- Coversal - Linux Remote Control

Connectivité

- Sensors
- Triggers
- Relais

Livre à conseiller

Références

- http://www.tuxboard.com/gadgets-des-agents-secrets/
- http://projectsentrygun.rudolphlabs.com/
- http://www.geek.com/news/autonomous-nerf-sentry-gun-picks-its-targets-protects-your-toy-chest-1561381/
- http://blog.kaazing.com/2013/04/01/remote-controlling-a-car-over-the-web-ingredients-smartphone-websocket-and-raspberry-pi/
- http://www.raspberrypi.org/raspberry-pi-car-computer/