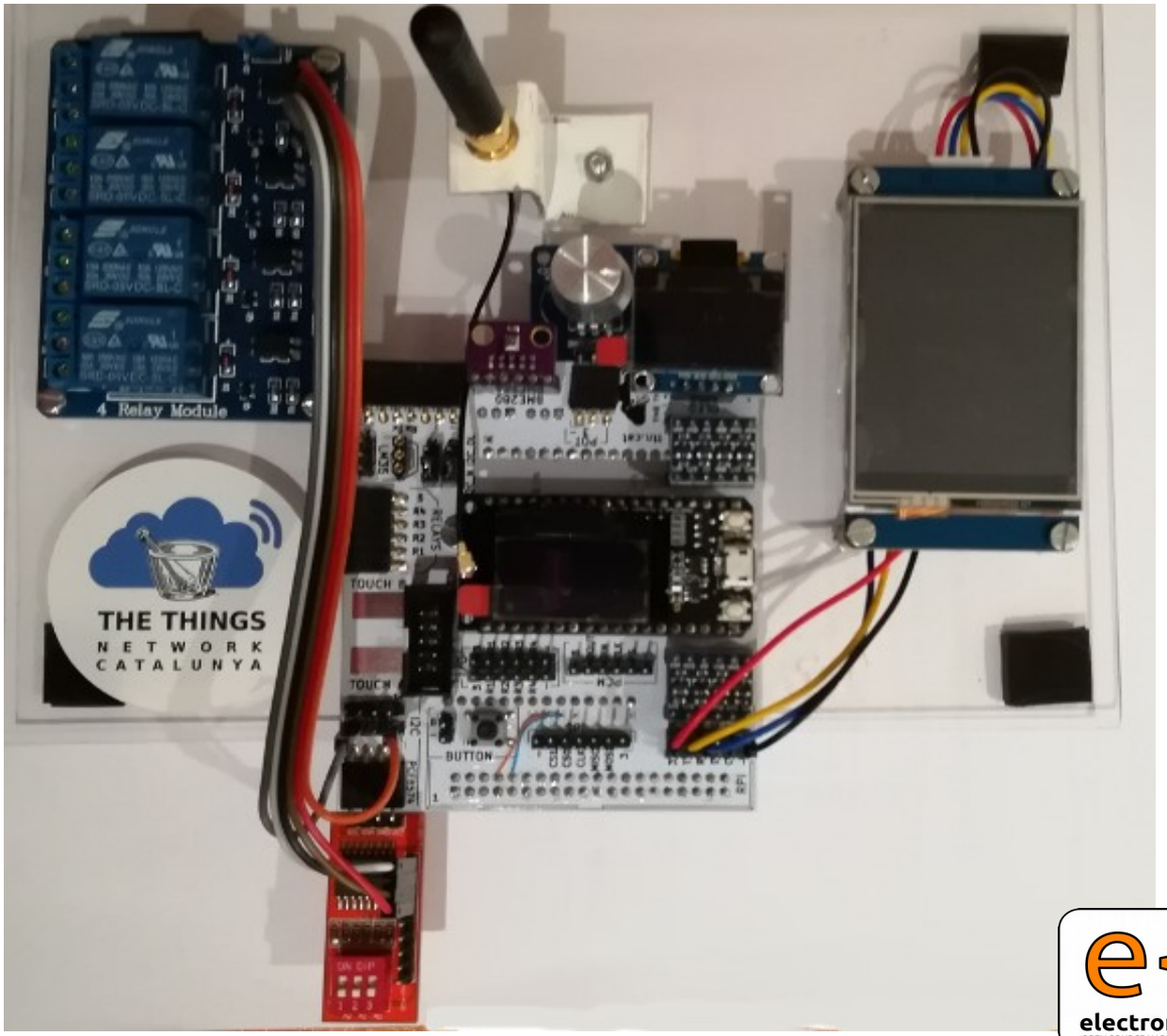
Conjunt IoT

Prova de connectivitat a The Things Network



THE THINGS
NETWORK
CATALUNYA

electronics.cat
OPEN SOURCE HARDWARE & TRAINING

JESUÏTES El Clot
Escola del Clot

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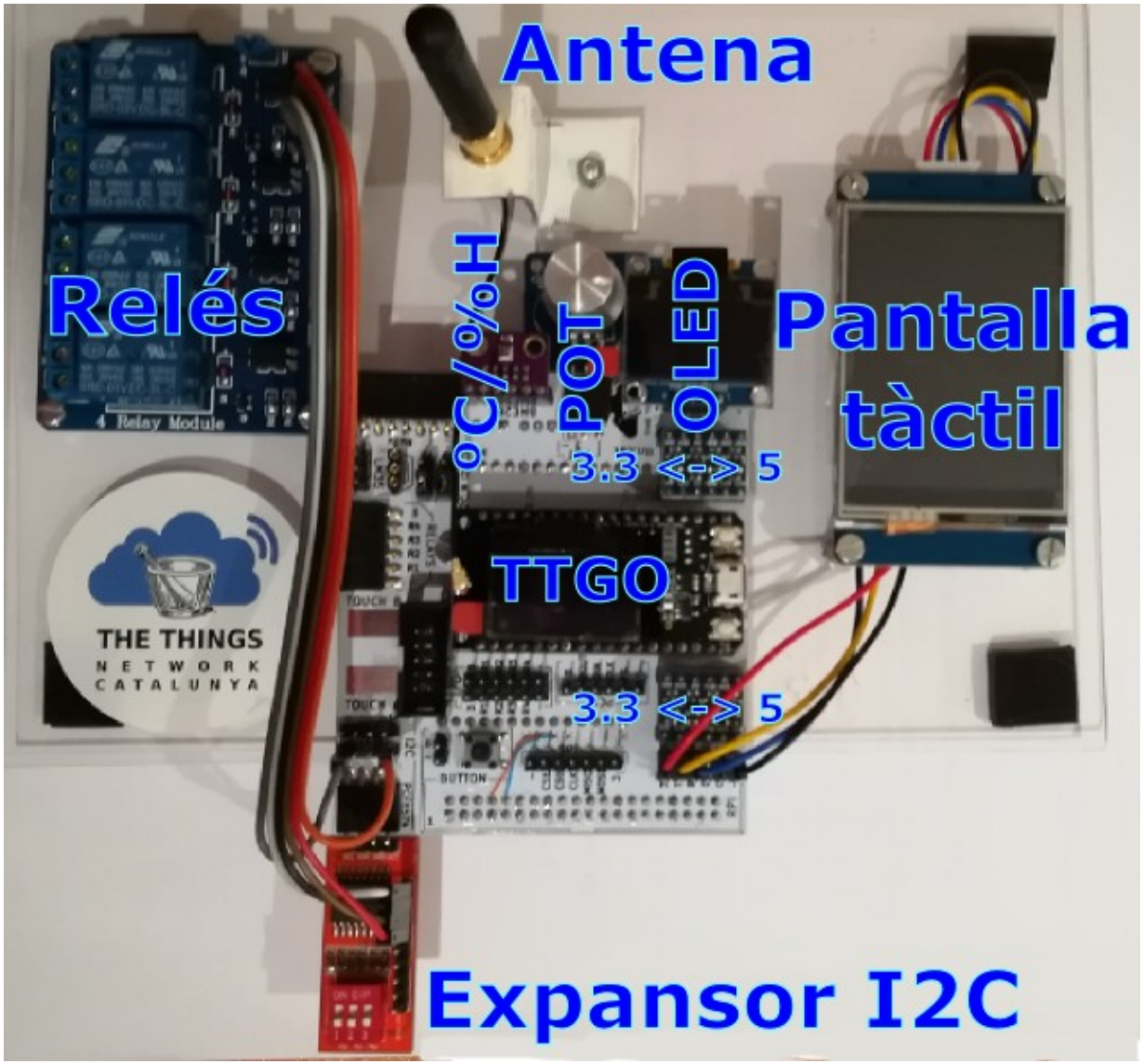
Conjunt de proves



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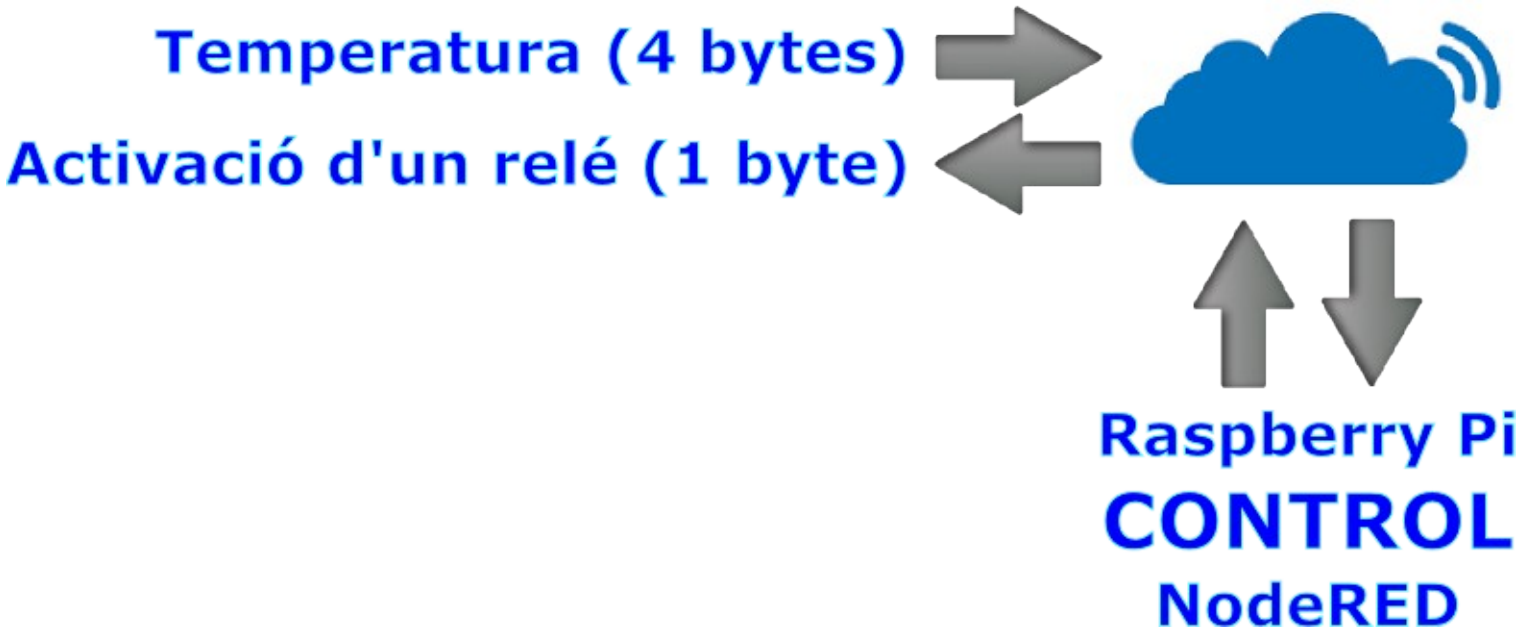
Objectiu



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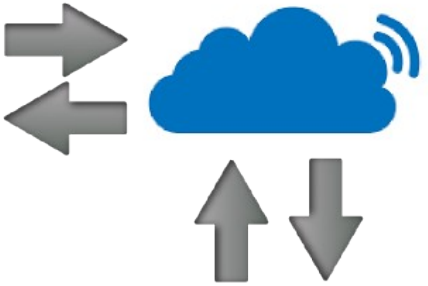
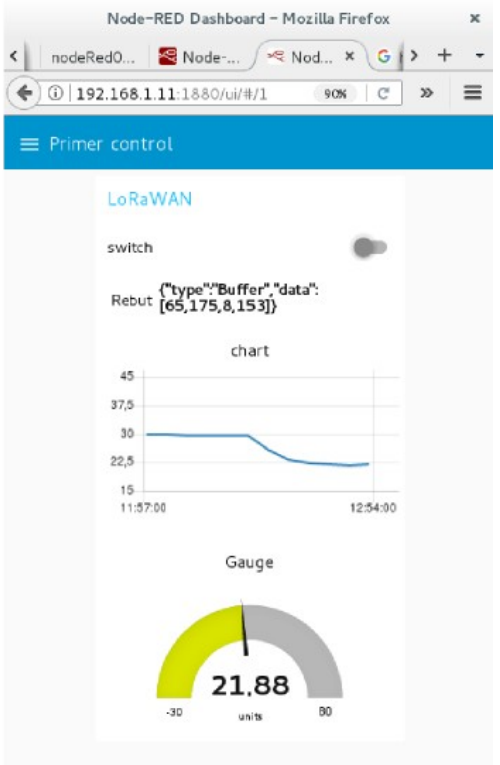
Objectiu





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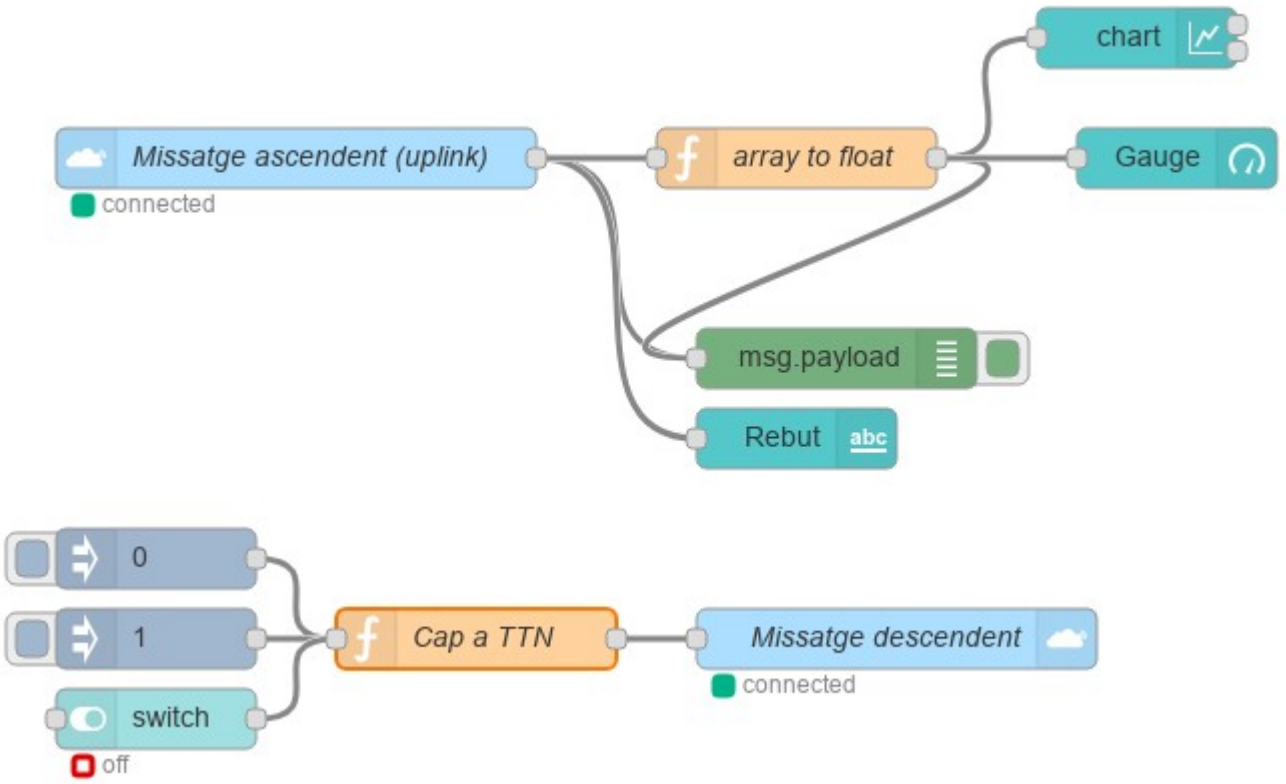

Podeu prémer el botó dret i desar al vostre ordinador aquest codi:
https://www.binefa.cat/IoT/nodeRed/prj/ttnCtrl/ttnCtrl.nodered.txt

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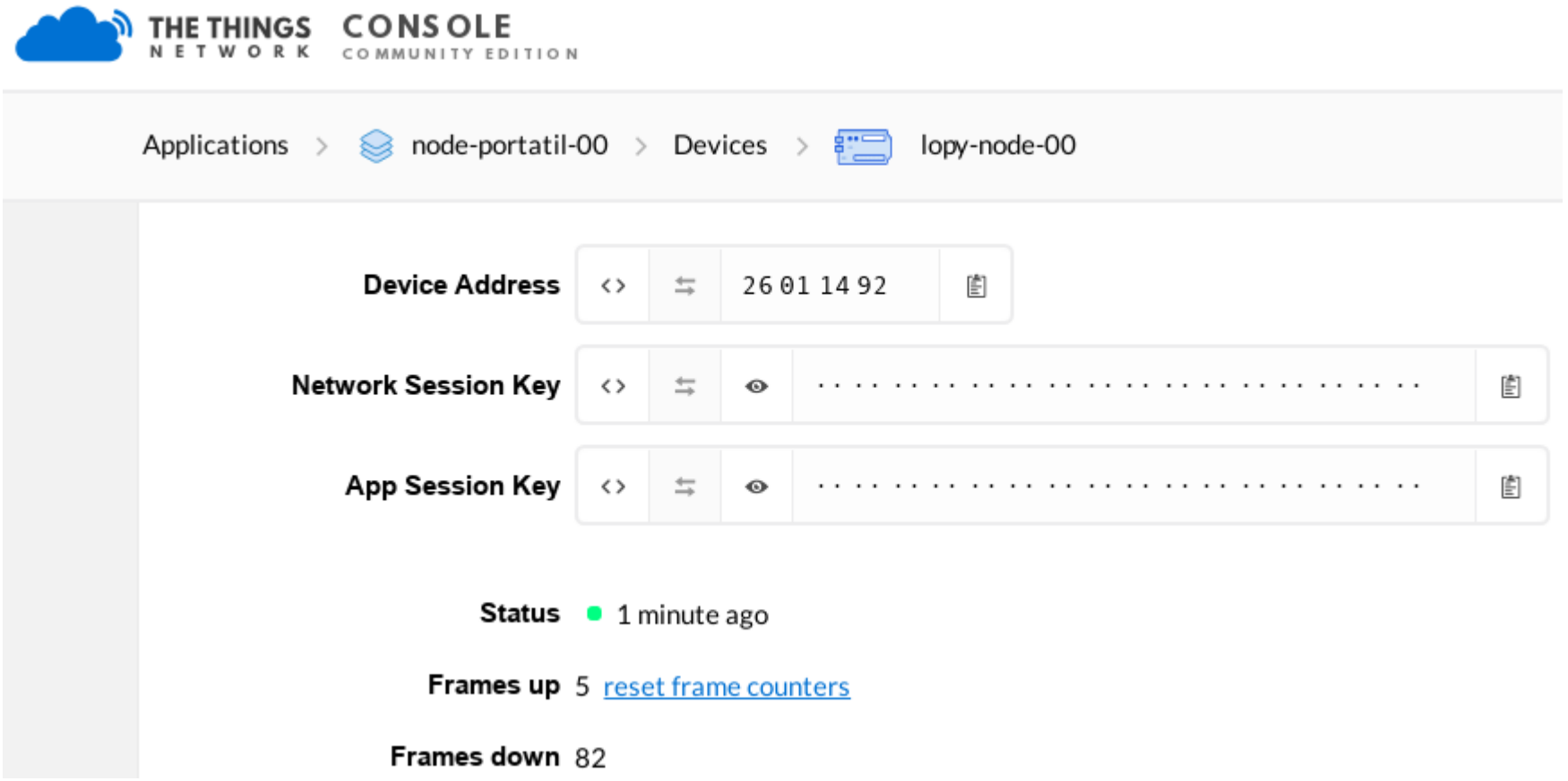

Podeu copiar a un editor de text pla:
1) Device Address
2) Network Session Key
3) App Session Key

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esp32_lorawan_ttnEsp32_ttgo_multichannel_02 | credentials.h | pinMapping.h

```
#define LORA_MODE_ABP   0
#define LORA_MODE_OTAA  1

#define LORA_MODE LORA_MODE_ABP

#if LORA_MODE == LORA_MODE_ABP
  /* NWKSKEY, APPSKEY and DEVADDR should by modifed by your actual values */
  //static const PROGMEM u1_t NWKSKEY[16] = { 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0
  //static const u1_t PROGMEM APPSKEY[16] = { 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0
  //static const u4_t DEVADDR = 0x00000000 ;

  static const PROGMEM u1_t NWKSKEY[16] = { 0xC3, 0xA9, 0x7C, 0x21, 0x69, 0x07, 0x1
  static const u1_t PROGMEM APPSKEY[16] = { 0x46, 0x1D, 0xBD, 0x77, 0xDC, 0xF9, 0x0
  static const u4_t DEVADDR = 0x26011492 ;

#endif

#if LORA_MODE == LORA_MODE_OTAA
    // De moment no és operatiu a aquesta versió
    const char *appEui = "";
    const char *appKey = "";
#endif
```

Codi font per a actualitzar amb els valors de The Things Network:
https://github.com/jordibinefa/arduino-IDE-codes/tree/master/esp32_lorawan_tt

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THE THINGS NETWORK CONSOLE COMMUNITY EDITION

Applications > node-portatil-01

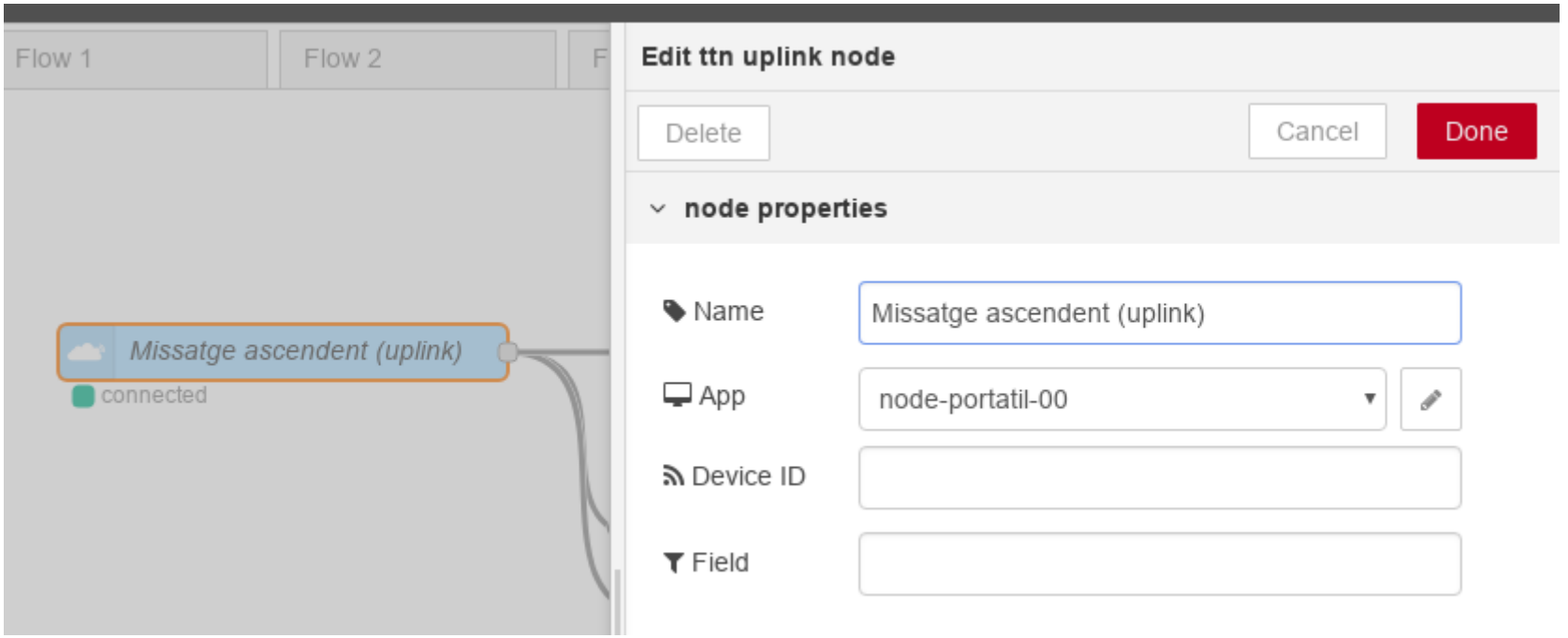
Application ID node-portatil-01

Description Node per al curset

Created 5 months ago

Handler ttn-handler-eu *(current handler)*

Al NodeRED heu de posar el nom de l'aplicació.



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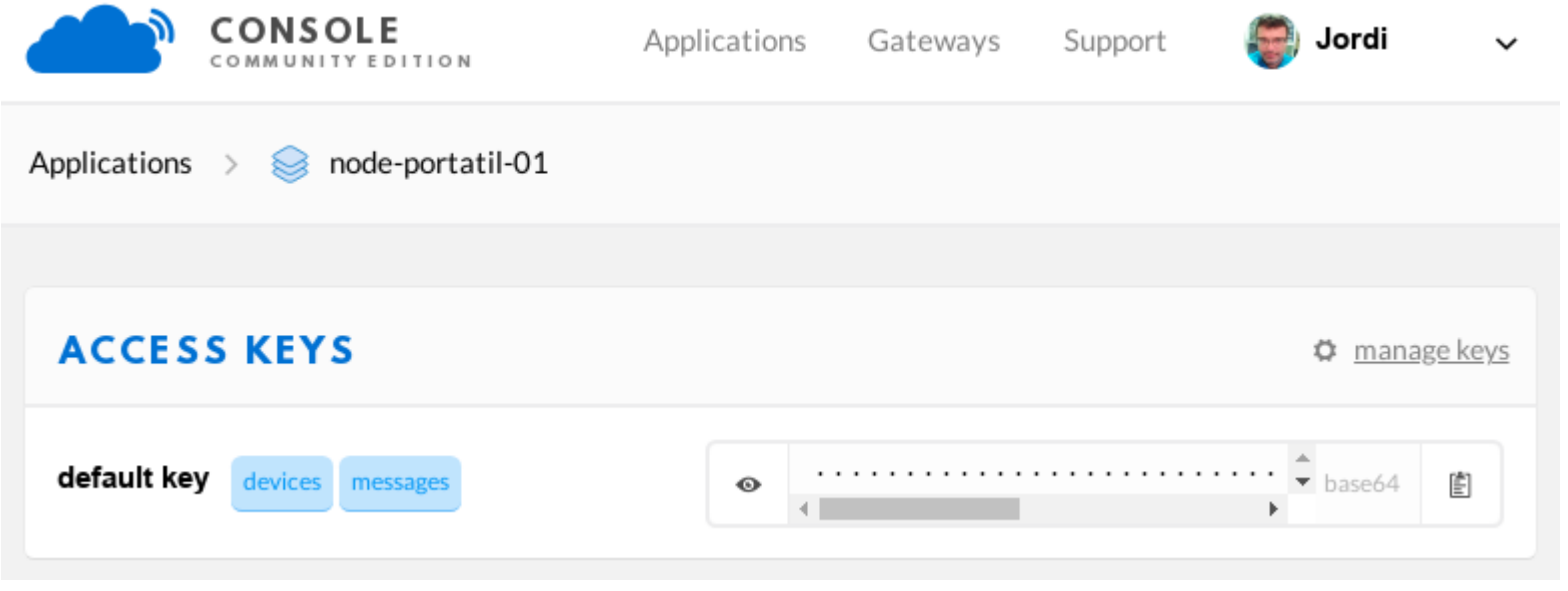
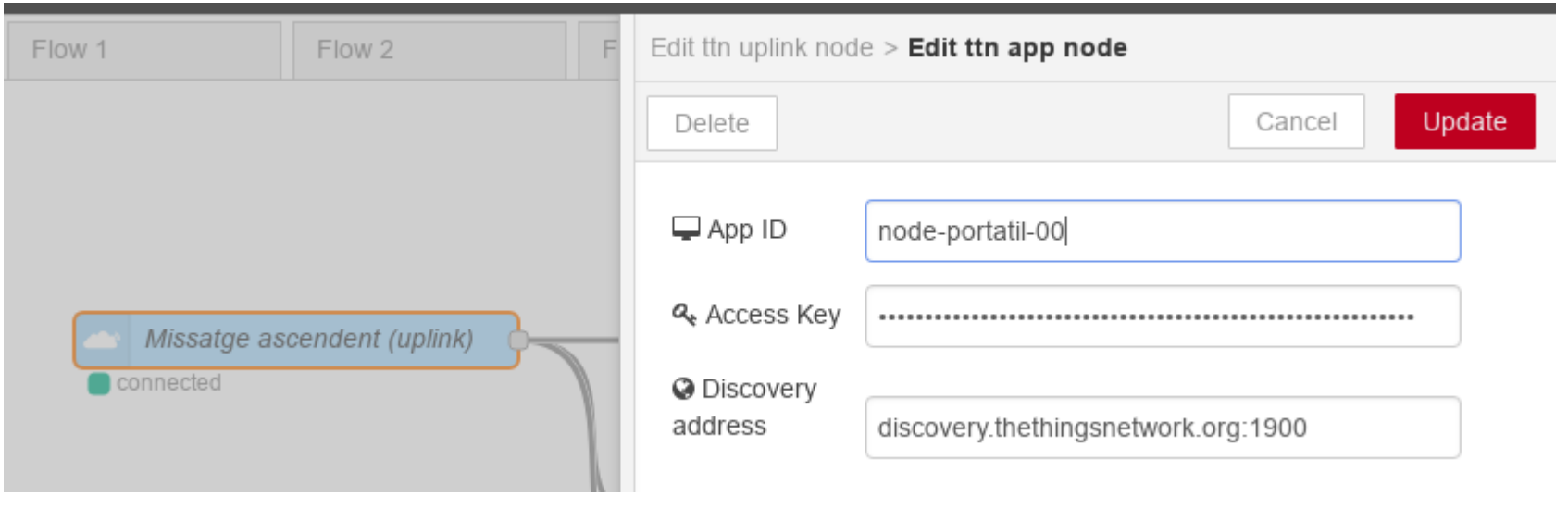


Copieu i enganxeu la clau d'accés des de The Things Network al NodeRED.



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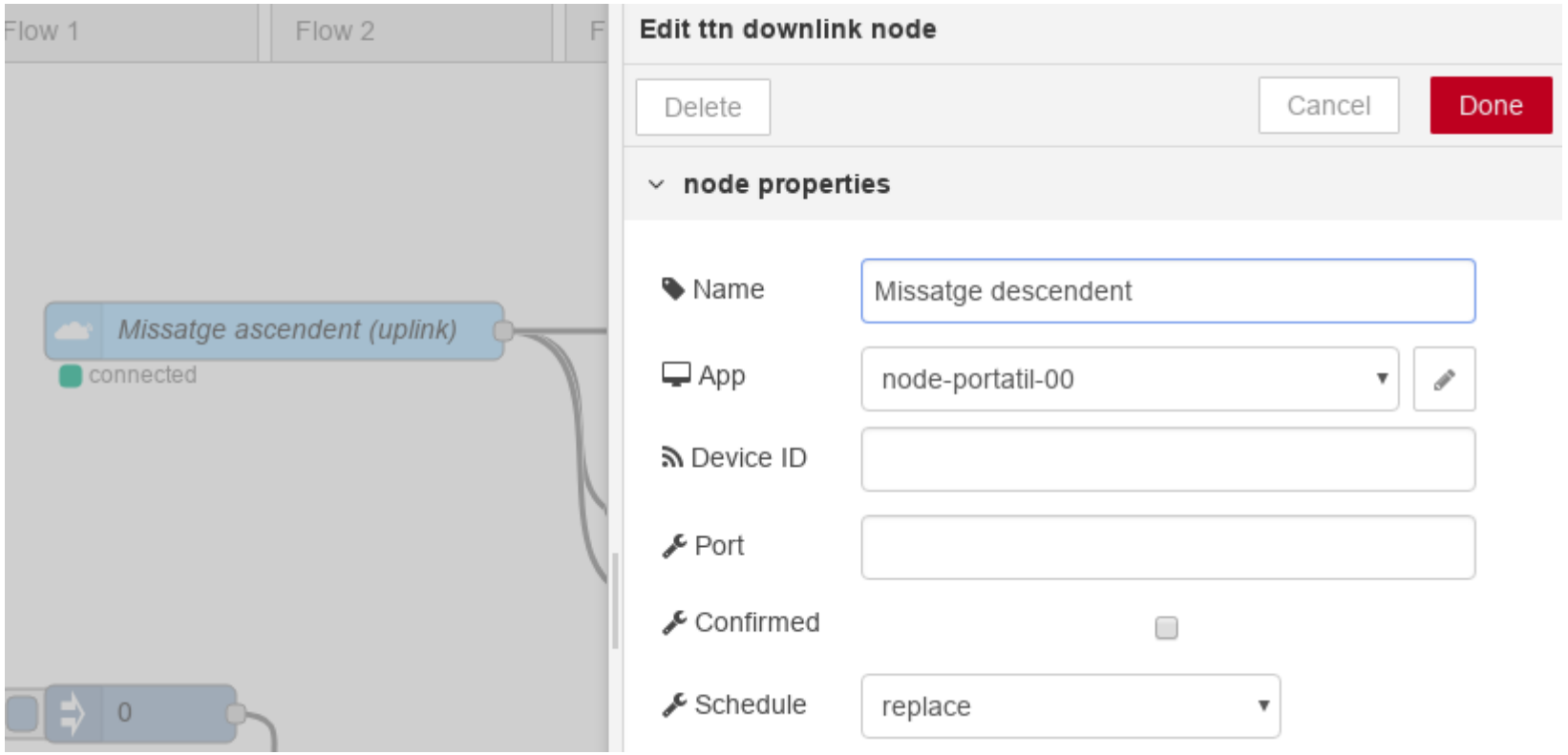

Configuració del missatge ascendent (***uplink***)

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Edit function node

Delete | Cancel | Done

node properties

Name: array to float

Function

```
var data =  msg.payload;
// Create a buffer
var buf = new ArrayBuffer(4);
// Create a data view of it
var view = new DataView(buf);
// set bytes
data.forEach(function (b, i) {
    view.setUint8(i, b);
});
// Read the bits as a float; note that by doing thi
// converting it from a 32-bit float into JavaScrip
var num = view.getFloat32(0);
num = Math.round(num*100)/100;
// Done
msg.payload = num;

return msg;
```

Outputs: 1

See the Info tab for help writing functions.

Edit function node

Delete | Cancel | Done

node properties

Name: Cap a TTN

Function

```
return {
    dev_id:    "lopy-node-00",
    port:      msg.port,
    schedule:  "replace",
    confirmed: false,
    payload:   Buffer.from([msg.payload ? 0x71:0x51])
};
```

Outputs: 1

See the Info tab for help writing functions.

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