

RISULTATO FINALE -> i parametri del tuo SMARTBMS sempre aggiornati sul tuo Smartphone

Il **dongle WiFi SmartBMS ScanLabs** esporta un file di configurazione completo per **IoT MQTT Panel** Il risultato ultimo sul tuo telefono sarà questo, lo potrai personalizzare a piacimento.

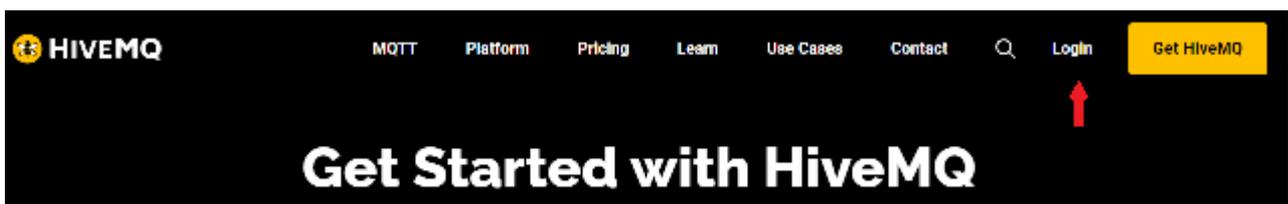


Scarica subito l'app IoT MQTT Panel sul tuo SmartPhone – verifica che il tuo telefono sia compatibile
Per scaricare l'app vai sul tuo Store di riferimento, l'app è disponibile sia per Android che per iOS
il sito dello sviluppatore è www.snrlab.in
L'app al momento non richiede alcun pagamento o registrazione.

CREARE UN ACCOUNT PRESSO UN BROKER MQTT

In questo esempio useremo HIVEMQ – piano “Serverless” che per finalità hobbistiche è gratuito ed offre caratteristiche più che sufficienti per questo progetto.

- 2- Andare al link: <https://www.hivemq.com/products/mqtt-cloud-broker/>
- 3- Clicca su **Login**



- 4- Login.
usa il metodo che preferisci, LOG IN WITH GOOGLE è immediato.

HIVEMQ
CLOUD

Unleash the Potential of IoT with HiveMQ Cloud.

HiveMQ Cloud is a fully-managed service for your IoT messaging needs.

- ✓ Start for Free: Kickstart your IoT journey by connecting up to 100 devices for free.
- ✓ Unrestrained Integration: Boost your use cases with seamless data integration with third-party services.
- ✓ Scalability with Ease: Upgrade as needed. HiveMQ Cloud offers reliability and security, irrespective of scale.
- ✓ Total MQTT Support: Leverage our complete support for the MQTT specification for adaptable and efficient IoT solutions.

Log In Sign Up

LOG IN WITH GITHUB

LOG IN WITH GOOGLE

LOG IN WITH LINKEDIN

or

yours@example.com

your password

Don't remember your password?

Log In >

- 5- Seleziona il piano “Serverless FREE” premi su “Get Started”

Your Clusters

Select the HiveMQ Cloud plan you need

Serverless	Starter	Professional
FREE By selecting Get Started you agree to our current SaaS Terms .	Starts from \$0.34/hour + \$0.80/million messages \$250/month* <small>*estimated total</small>	Custom Pricing
Get Started	Get Started FREE	Contact Sales
No credit card required	15 day trial - no credit card required	
A basic MQTT broker for learning and experimenting with MQTT.	Complete MQTT platform for testing and small-scale production.	Production-ready, complete MQTT platform for scalable workloads.

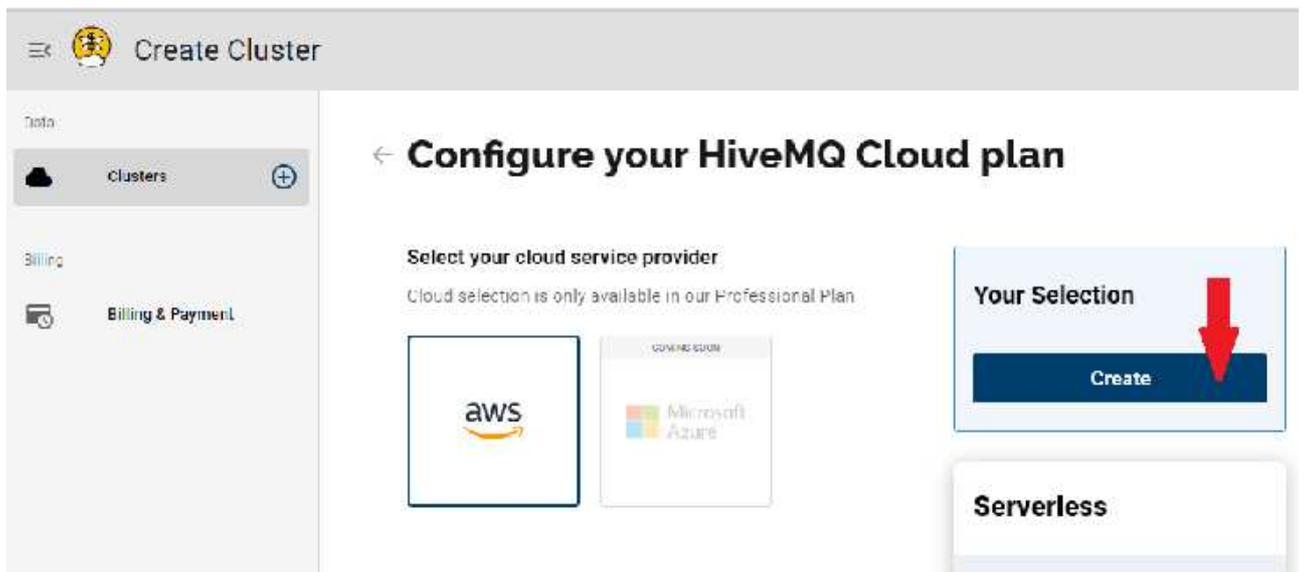
Clusters

Billing & Payment

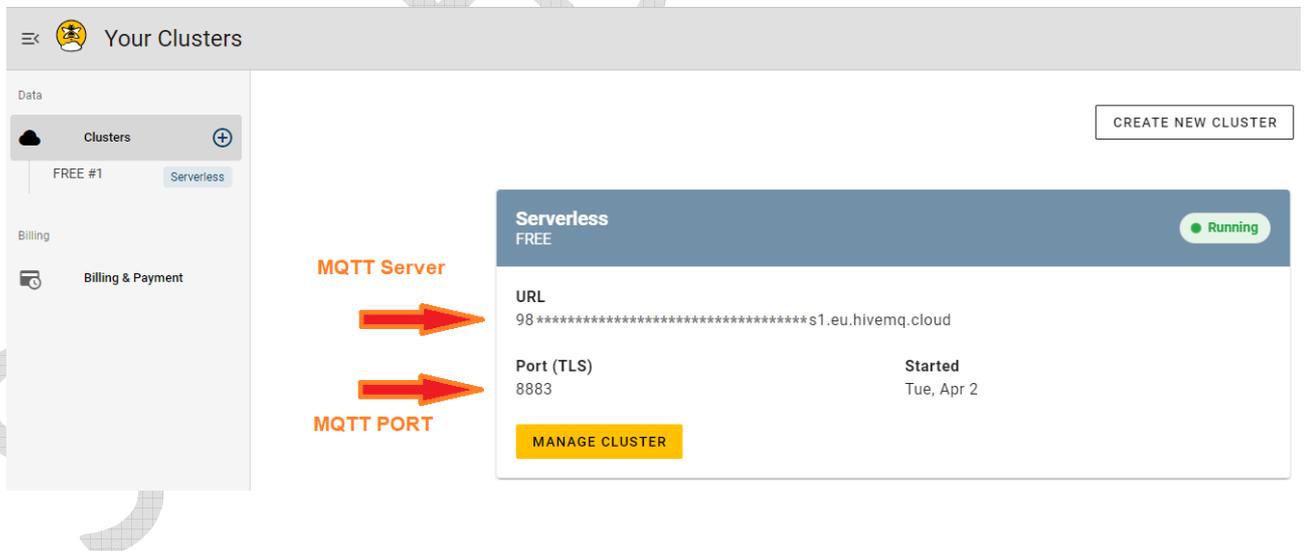
What's new

Help

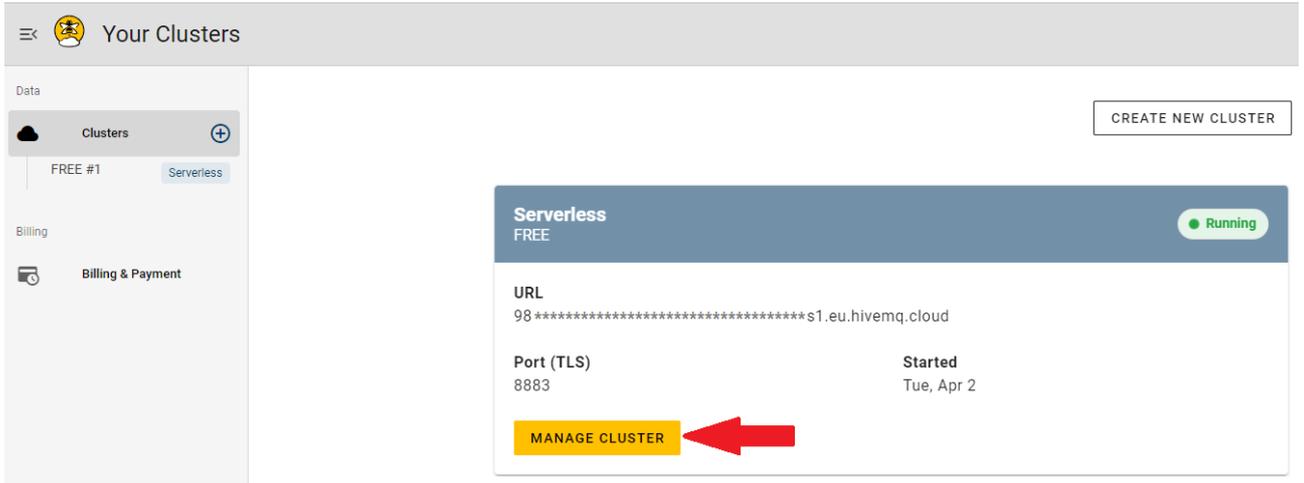
6- Premi il tasto "CREATE"



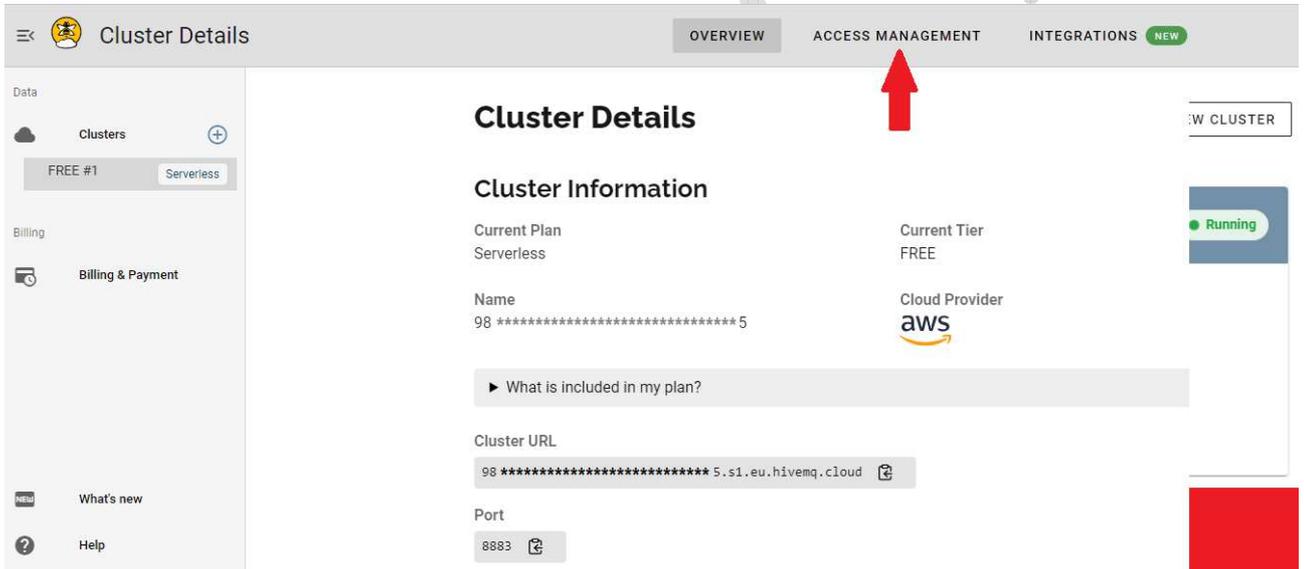
7- Prendi nota dell' MQTT Server Name e della MQTT Port – queste due informazioni sono necessarie per la configurazione del dongle.



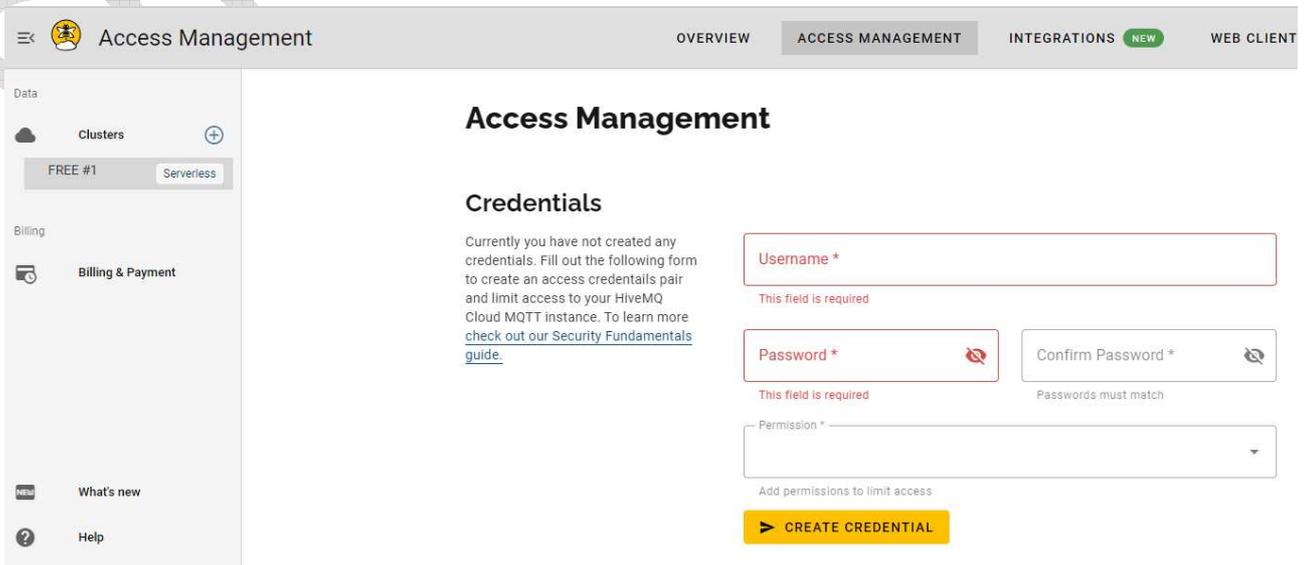
8- Premi su : “MANAGE CLUSTER”



9- ACCESS MANAGEMENT



10- Impostare le proprie credenziali di accesso – USERNAME e PASSWORD andranno inseriti nel **dongle WiFi SmartBMS ScanLabs**



11- Nel campo PERMISSION , impostare "PUBLISH and SUBSCRIBE"

12- Premere CREATE CREDENTIAL

The screenshot shows the 'Access Management' interface. The 'Credentials' section contains a form with the following fields:

- Username ***: A text input field with a placeholder of 10 dots. Below it, the text 'At least 5 characters' is displayed.
- Password ***: A password input field with a placeholder of 10 dots and an eye icon. Below it, the text 'At least 8 characters, 1 digit, 1 uppercase character' is displayed.
- Confirm Password ***: A password input field with a placeholder of 10 dots and an eye icon. Below it, the text 'Passwords must match' is displayed.
- Permission ***: A dropdown menu with 'Publish and Subscribe' selected. Below it, the text 'Add permissions to limit access' is displayed.

A yellow button labeled 'CREATE CREDENTIAL' is located at the bottom right of the form. A red arrow points to this button from the left.

13- Verifica che le credenziali siano attive, compariranno in basso come nel riquadro

The screenshot shows the 'Access Management' interface with a table of created credentials. The table is highlighted with a red border and contains the following data:

Username	Permission type	Actions
*****	Publish and Subscribe	

- 14- Apri il Browser preferito. Nell'url inserisci <http://smartbms:6789> (cambia la porta 6789 se l'hai personalizzata attraverso i comandi AT)
Vai nel menù **"Settings"**

Non sicuro | smartbms:6789 1

Status Battery Monitor Settings

SOC 26%

Tuesday, April 02 2024 10:05:25
SunRise 06:50 - SunSet 19:37 (+180s)
Today lightrain Frscst cloudy
Battery Pack V-I: 49.90 V, 5.50 A
CHARGING 274.45 W
Remaining Capacity 52 Ah
Package Temperature: 10.00 °C
Average Batteries: 3119mV
ΔV on 16 Cells: 8 mV
BMS Chrg / Dischrg Cycles: 171
Discharge MOSFet Status: ON
Charge MOSFet Status: ON
No Alarms
BMS Heartbeat: 9
FW Version: 2.0.7_REPC

- 15- Poi nel menù **"MQTT CONFIG"**

Status Battery Monitor Settings

Config File Version # 2

WiFi Mode: AP (WiFi **Station Mode**)

SSID: Tenda_Extender
PASSPHRASE: ..
WiFi Power [dBm]: 4

Static IP:

Latitude: 41.890301 Longitude: 12.492200 [Google maps](#)
Tuesday, April 02 2024 10:07:19 --- [Sync with PC](#)
Time Zone GMT+: 2

Submit

MQTT CONFIG MISC CONFIG FILE MNGR DEBUG

System Restart ** Factory Reset **

16- CONFIGURA il Client MQTT usando le credenziali impostate ed ottenute da HIVEMQ
 Segui gli Steps da 1 a 3

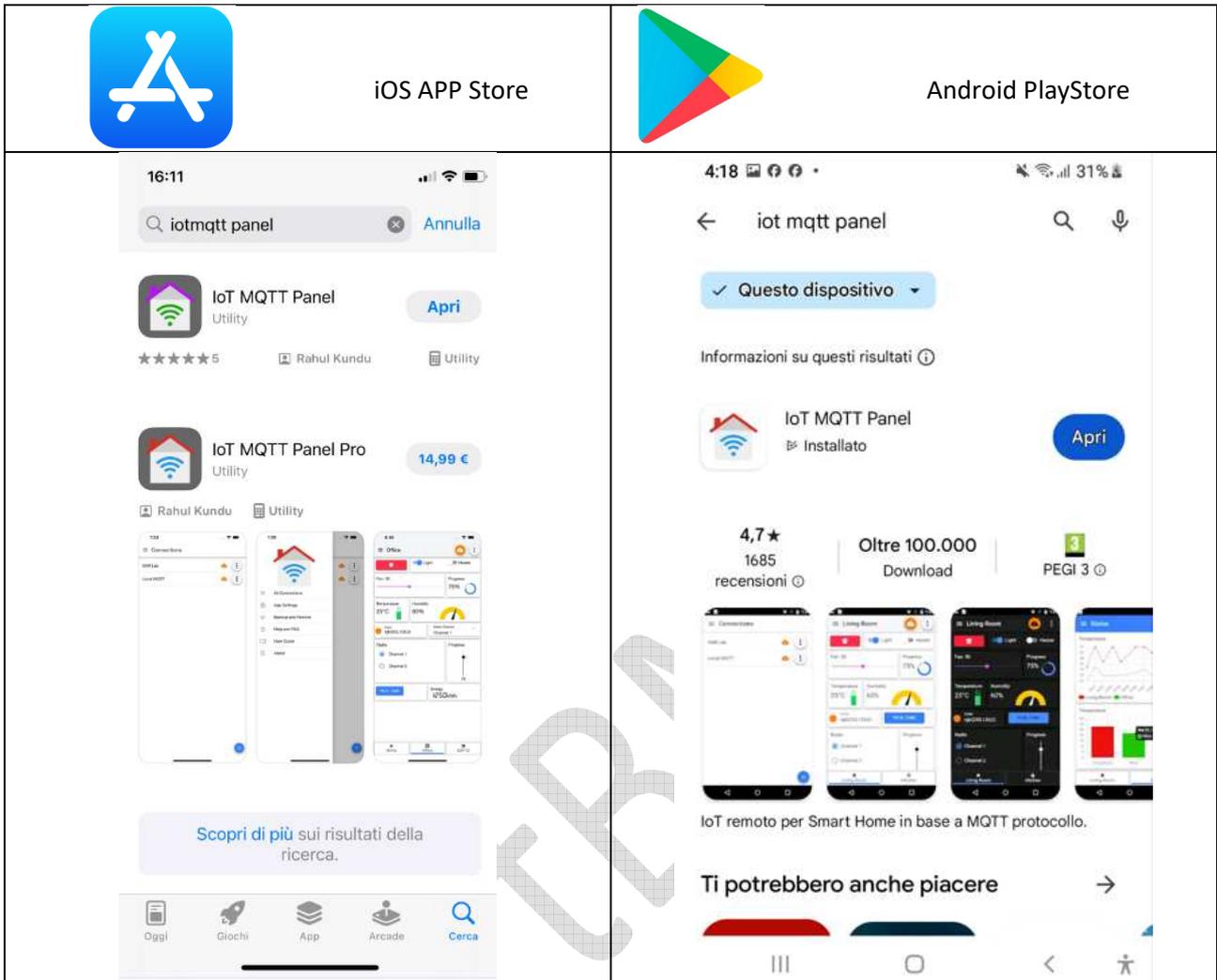
NOTA: MQTT Client ID e' un tuo identificativo univoco , può essere "0001" ad esempio .
 Se hai piu' dongle o piu' subscriber MQTT , ognuno deve avere un ID diverso.

- 1- Configura il Client MQTT usando le credenziali impostate ed ottenute da HIVEMQ come indicato in esempio
- 2- Assicurati che tutti i checkmark siano impostati come in figura
 Premi su SUBMIT
- 3- Quando la pagina ricarica, premi su "TEST MQTT" se tutto va bene ti dirà:
 MQTT Server: **CONNECTED**

The screenshot shows the MQTT CONFIG page. The MQTT Server status is **DISCONNECTED**. The configuration fields are: MQTT Server (empty), MQTT PORT: 8883, Use TLS: , MQTT User Name (empty), MQTT Password (empty), and MQTT Client ID (empty). A red box labeled '1' surrounds these fields. The 'Test MQTT' button is labeled '3' with a red arrow. The 'Submit' button is labeled '2' with a red arrow. The 'PUBLISHED JSON' section shows battery data: "bat": { "0": 2947, "15": 2949 ==> millVolts }, "SOC": 27, ==> Status of Charge [%], "PWT": 42, ==> Battery Pack Watt [W], "PMV": "47.10", ==> Pack Volts [V], "PMA": "0.90", ==> Pack Current [A], "PDV": 6, ==> Delta mVolts between cells [mV], "AMV": "2946.00" ==> Average mVolts on cells [mV]. On the right, the 'Cluster Details' panel shows 'Current Tier: FREE' and 'Cloud Provider: aws'. The 'Access Management' panel shows 'Credentials' with fields for Username and Password, and a 'CREATE CREDENTIALS' button.

The screenshot shows the MQTT CONFIG page after successful configuration. The MQTT Server status is **CONNECTED**. The configuration fields are: MQTT Server (98), MQTT PORT: 8883, Use TLS: , MQTT User Name (*****), MQTT Password (*****), and MQTT Client ID (001). A red arrow points to the 'Test MQTT' button. The 'PUBLISHED JSON' section shows the same battery data as the previous screenshot.

17- Installa "IoT MQTT Panel" sul tuo smartphone , l'app e' disponibile per Android ed iOS



18- Dal tuo smartphone, vai alla pagina web del dongle .

Lo puoi fare attraverso il tuo browser preferito

su iOS e sulle versioni piu' recenti di Android scrivi nella barra degli url l'indirizzo :

<http://smartbms.local:6789>

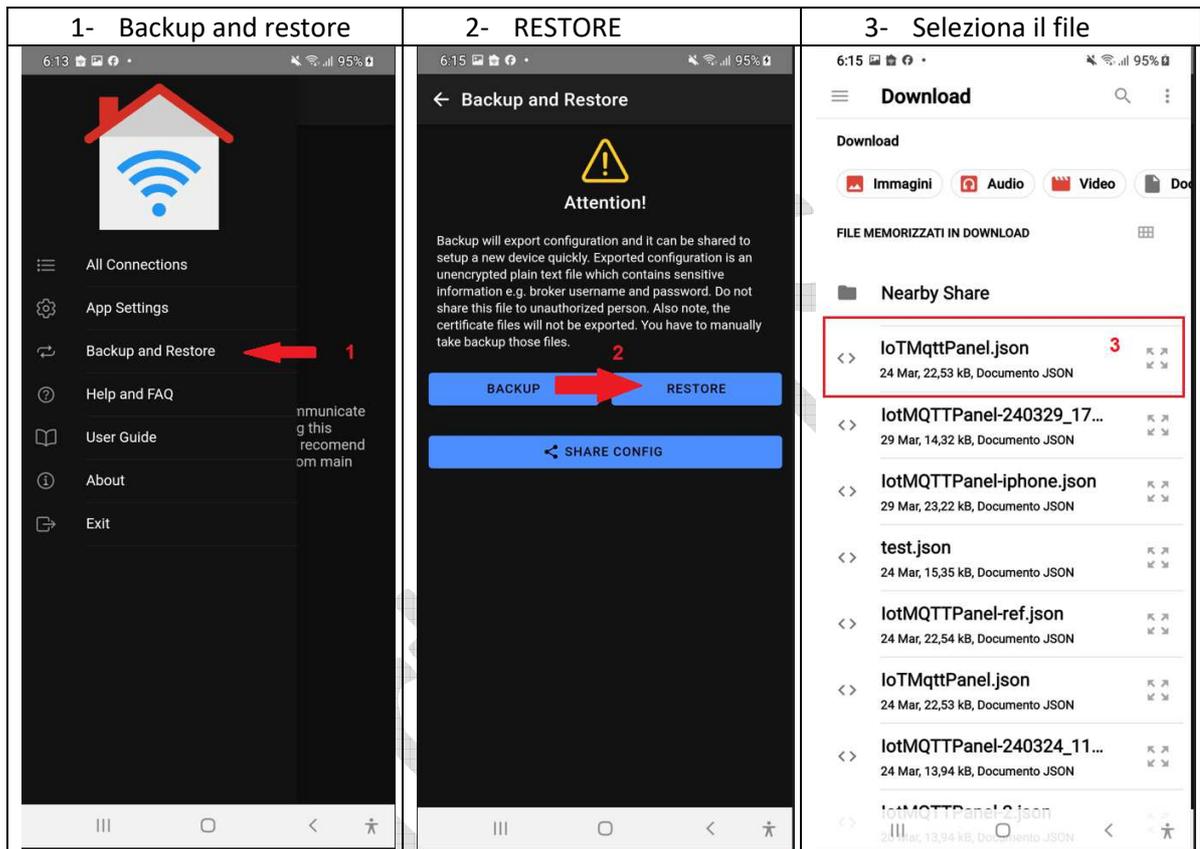
Sulle versioni meno recenti di Android dovrai invece inserire l'indirizzo IP del dongle che trovi accedendo via USB alla console del dongle. Subito dopo il boot il dongle indica il suo indirizzo ip :

```
COM22 - Tera Term VT
File Edit Setup Control Window Help
57600,8,N,1
dJÄTG PpJdXS`H%lJ,P@wWZ
`\B0Z`H+i2DUÄXÄ;*`PP@%`Xw(@G'LDU!`\B`N!
dXD*+nE...D0%dx@`yS+f

[AT Console] Init completed ! fw: 2.0.7_REPC
***** wifi STATION mode *****
Connected to AP SSID: ScanLabsWiFiHotSpot RSSI: -54dBm
IP Address: 192.168.2.186 PORT: 6789
MAC Addr: 34:94:54:81:74:09
Ready for AT command : type AT+CMD for complete list (remember! terminator NL&CR
)
```

19- Vai alla sezione “Settings” -> “MQTT CONFIG” in fondo premi il bottone “IoTMQTT Panel” e premi su “GENERATE”
verrà creato un file dal nome “IoTMqttPanel.json” che contiene tutte le impostazioni per realizzare la dashboard presentata all’inizio.
SCARICA il file “IoTMqttPanel.json”

20- Apri l’app “IoTMQTT Panel”, tre lineeette in alto a sinistra e segui i passi 1-2-3



21- Et VOILA' !