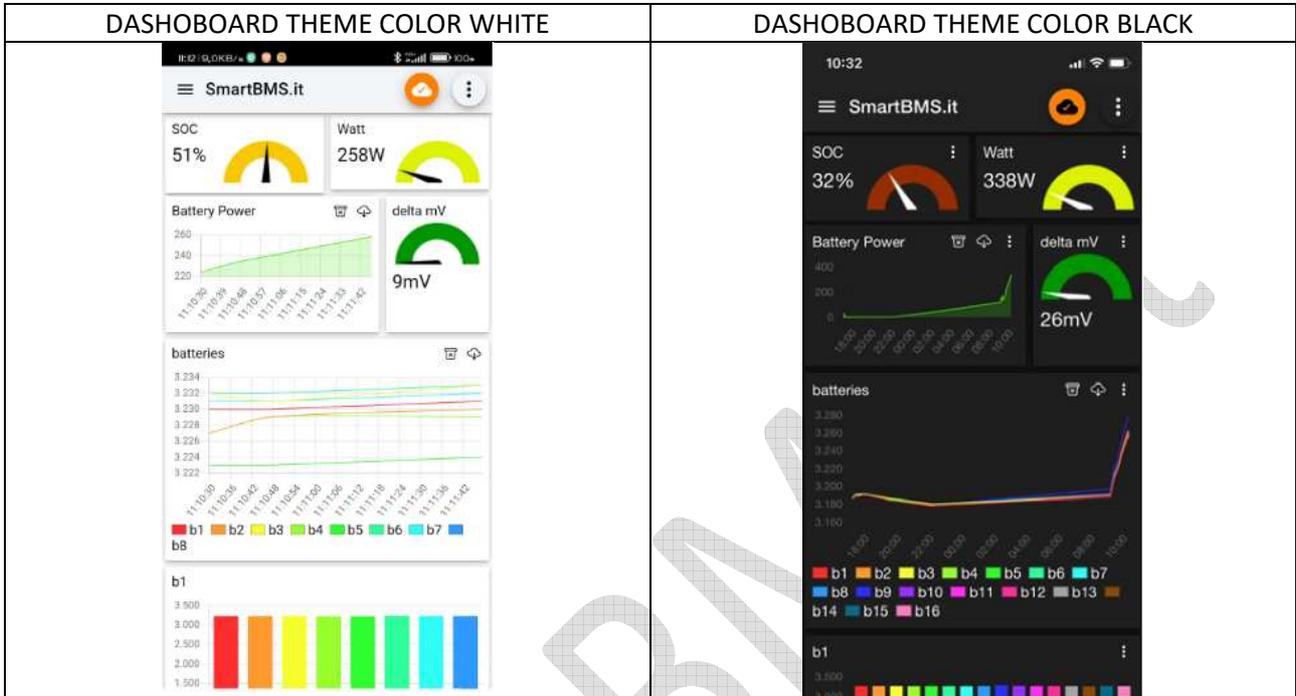


RISULTATO FINALE -> i parametri del tuo SMARTBMS sempre aggiornati sul tuo Smartphone

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.

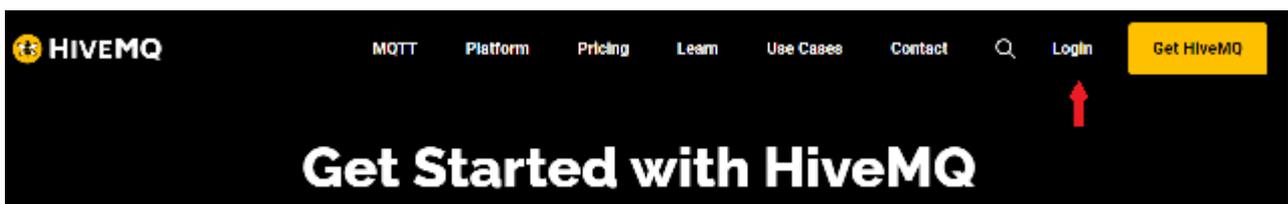


Scarica subito l'app IoT MQTT Panel sul tuo SmartPhone – verifica che il tuo telefono sia compatibile Per scaricare l'app vai sul tuo Store di riferimento, l'app e' disponibile sia per Android che per iOS il sito dello sviluppatore e' www.snrlab.in L'app al momento non richiede alcun pagamento o registrazione.

CREARE UN ACCOUNT PRESSO UN BROKER MQTT

In questo esempio useremo HIVEMQ – piano "Serverless" che per finalità hobbistiche è gratuito ed offre caratteristiche piu' 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

Data

Clusters +

Billing

Billing & Payment

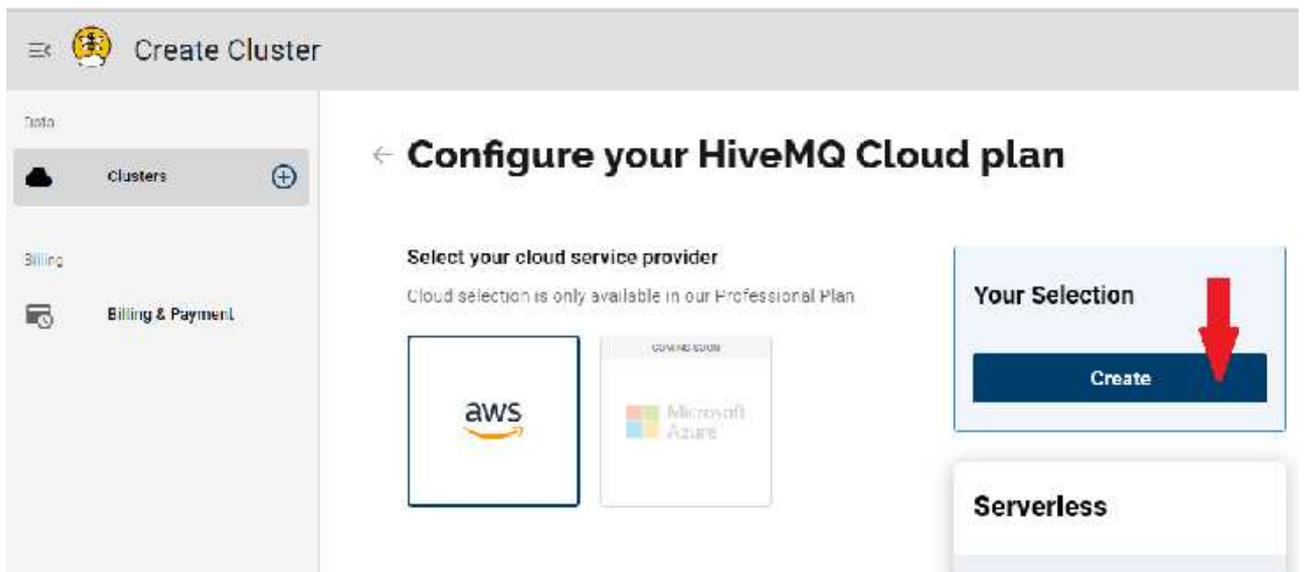
What's new

Help

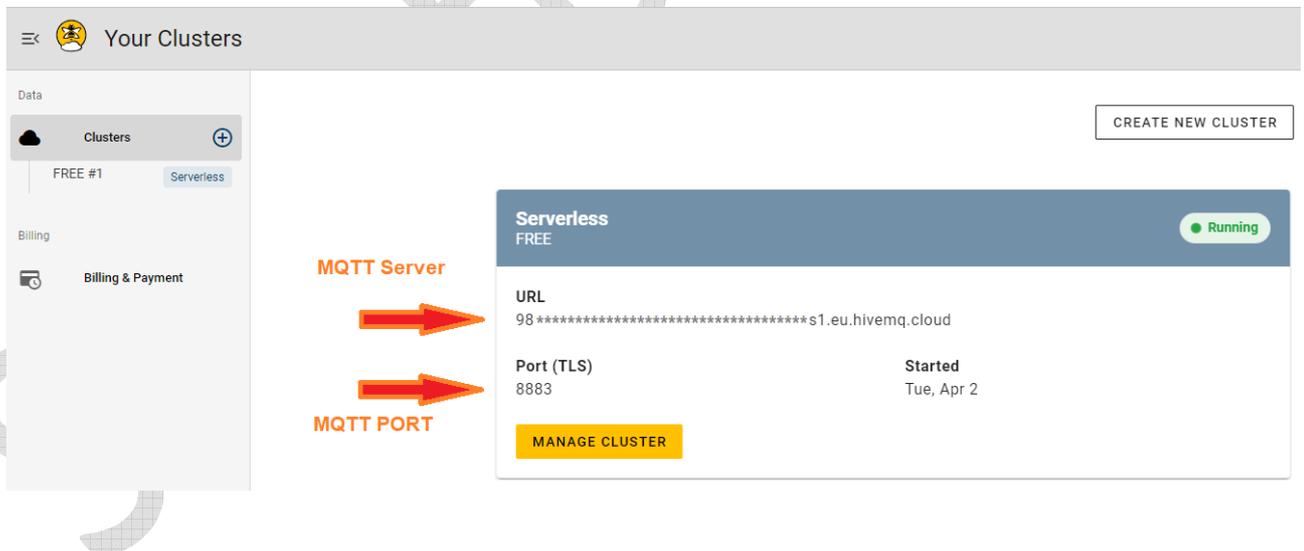
Select the HiveMQ Cloud plan you need

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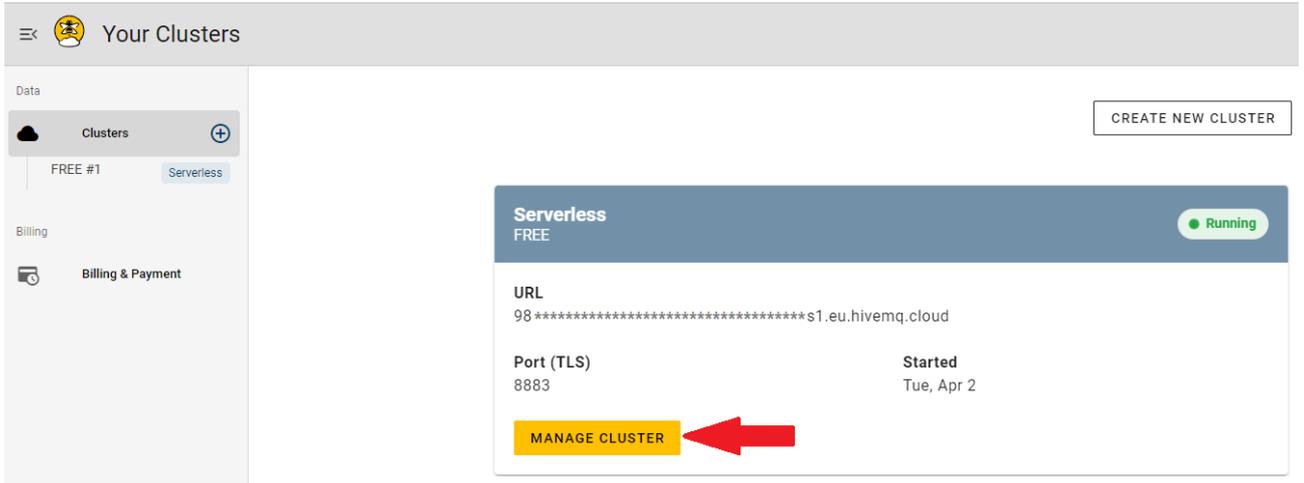
6- Premi il tasto "CREATE"



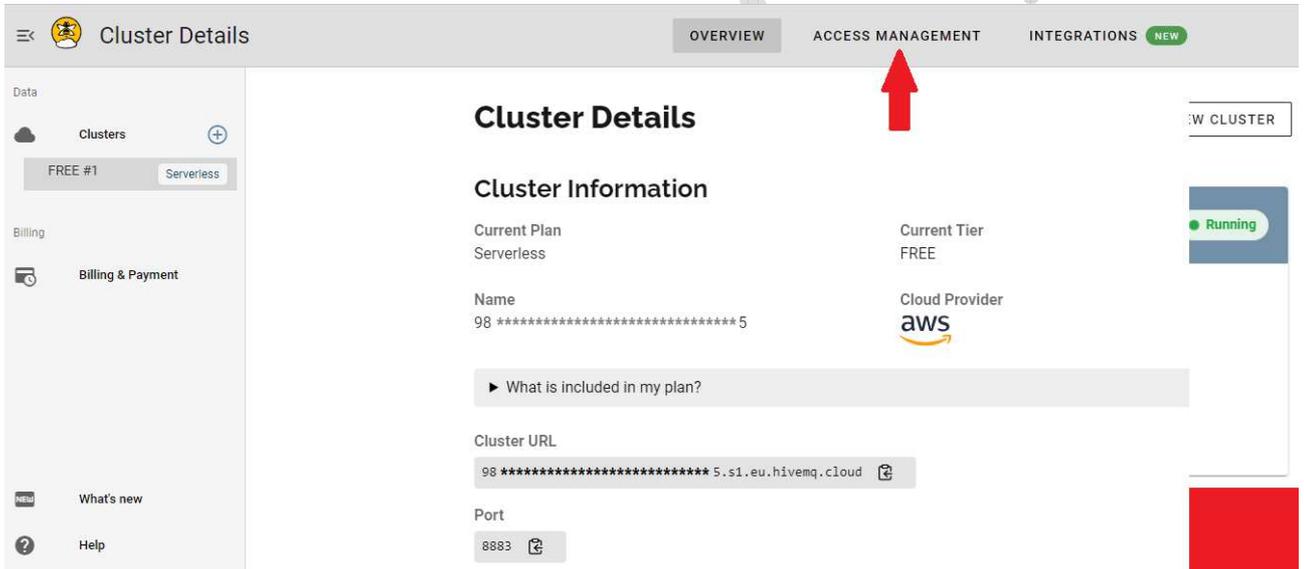
7- Prendi nota dell' MQTT Server Name e della MQTT Port – queste due informazioni sono necessarie per la configurazione del dongle.



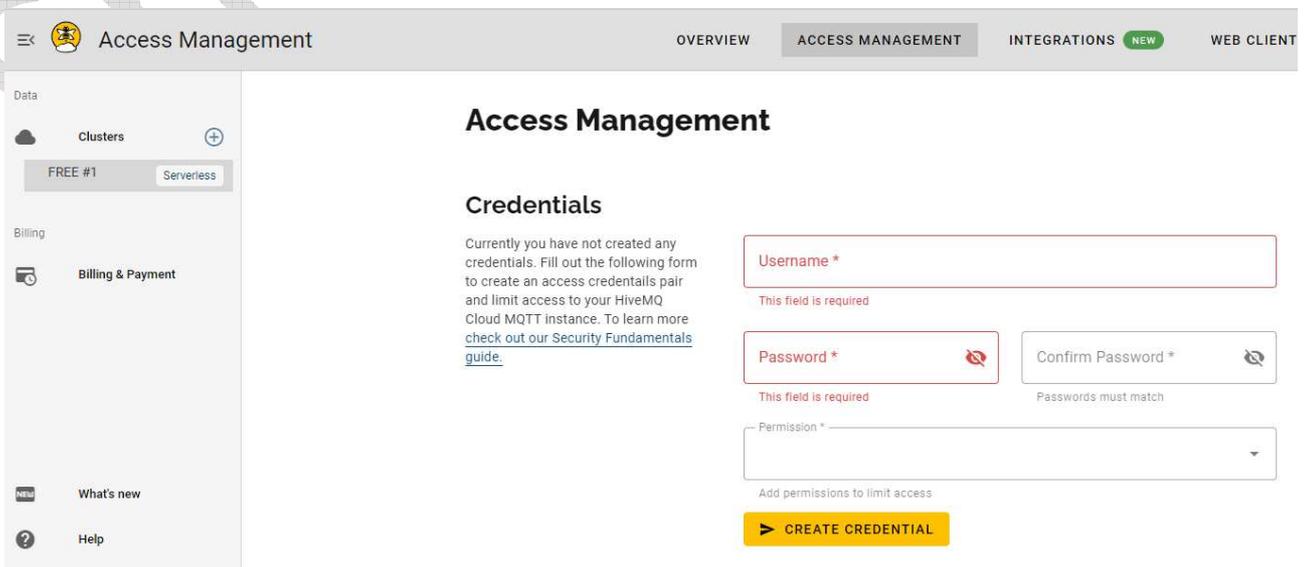
8- Premi su : “MANAGE CLUSTER”



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

Access Management

OVERVIEW ACCESS MANAGEMENT INTEGRATIONS NEW WEB CLIENT

Data

Clusters

FREE #1 Serverless

Billing

Billing & Payment

What's new

Help

Access Management

Credentials

Currently you have not created any credentials. Fill out the following form to create an access credentials pair and limit access to your HiveMQ Cloud MQTT instance. To learn more [check out our Security Fundamentals guide](#).

Username *

At least 5 characters

Password *

At least 8 characters, 1 digit, 1 uppercase character

Confirm Password *

Passwords must match

Permission *

Publish and Subscribe

Add permissions to limit access

CREATE CREDENTIAL

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

Access Management

OVERVIEW ACCESS MANAGEMENT INTEGRATIONS NEW WEB CLIENT

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FREE #1 Serverless

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What's new

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Logout

Access Management

Credentials

Define one or more sets of credentials that allow MQTT clients to connect to your HiveMQ Cloud cluster. To learn more [check out our Security Fundamentals guide](#).

Username *

At least 5 characters

Password *

At least 8 characters, 1 digit, 1 uppercase character

Confirm Password *

Passwords must match

Permission *

Add permissions to limit access

CREATE CREDENTIAL

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

- 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** Frccst **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:

PASSPHRASE:

WiFi Power [dBm]:

Static IP:

Latitude: Longitude: [Google maps](#)

Tuesday, April 02 2024 10:07:19 ---

Time Zone GMT+:

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 .

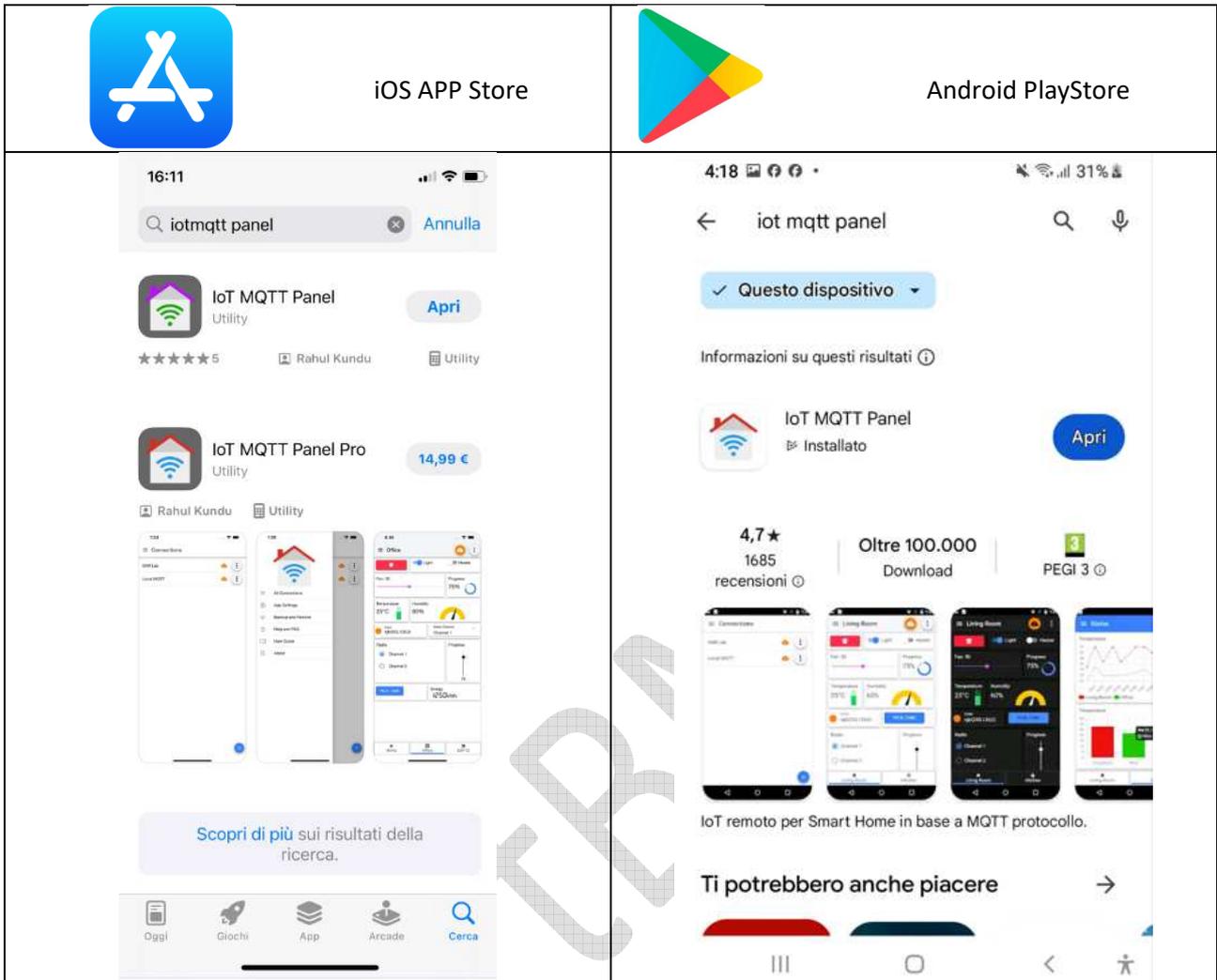
Se hai piu' dongle o piu' subscriber MQTT , ognuno deve avere un ID diverso.

- 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 with the status 'MQTT Server: DISCONNECTED'. A red box highlights the configuration fields: MQTT Server, MQTT PORT (8883), Use TLS (checked), MQTT User Name, MQTT Password, and MQTT Client ID. A red arrow labeled '1' points to the MQTT User Name field. A red arrow labeled '2' points to the Submit button. A red arrow labeled '3' points to the Test MQTT button. To the right, the Cluster Details panel shows 'Cluster Information' with 'Current Tier: FREE' and 'Cloud Provider: aws'. Below it, the Access Management panel shows 'Credentials' with fields for Username and Password, and a 'CREATE CREDENTIALS' button.

The screenshot shows the MQTT CONFIG page with the status 'MQTT Server: CONNECTED'. A red arrow points to the Test MQTT button. The configuration fields are filled with: MQTT Server: 98 5 s1 eu hivemq cloud, MQTT PORT: 8883, Use TLS: checked, MQTT User Name: ***** (masked), MQTT Password: [masked], and MQTT Client ID: 001. The PUBLISHED JSON output is visible, showing battery status data like SOC, PWT, PMV, PMA, PDV, and AMV. A Submit button is at the bottom left.

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

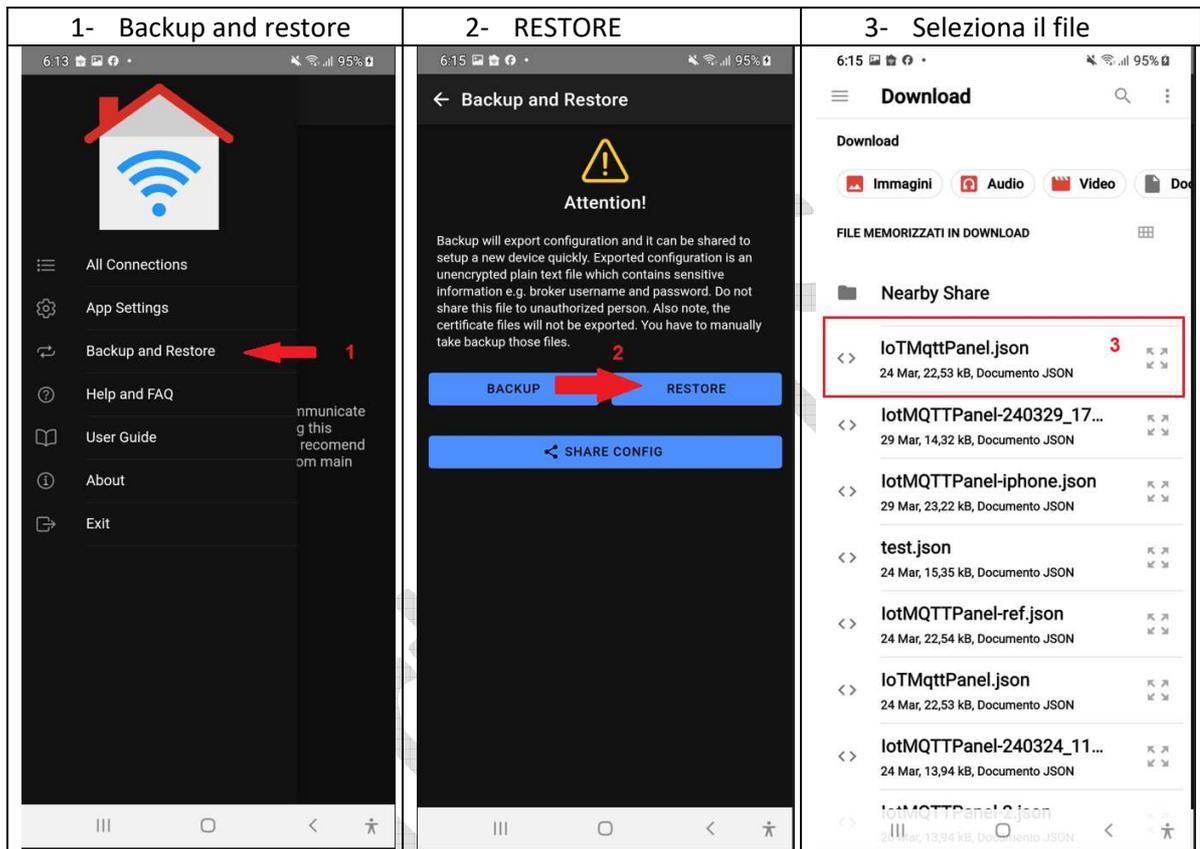
accedendo via USB alla console del dongle. Subito dopo il boot il dongle indica il suo indirizzo ip :

```
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' !