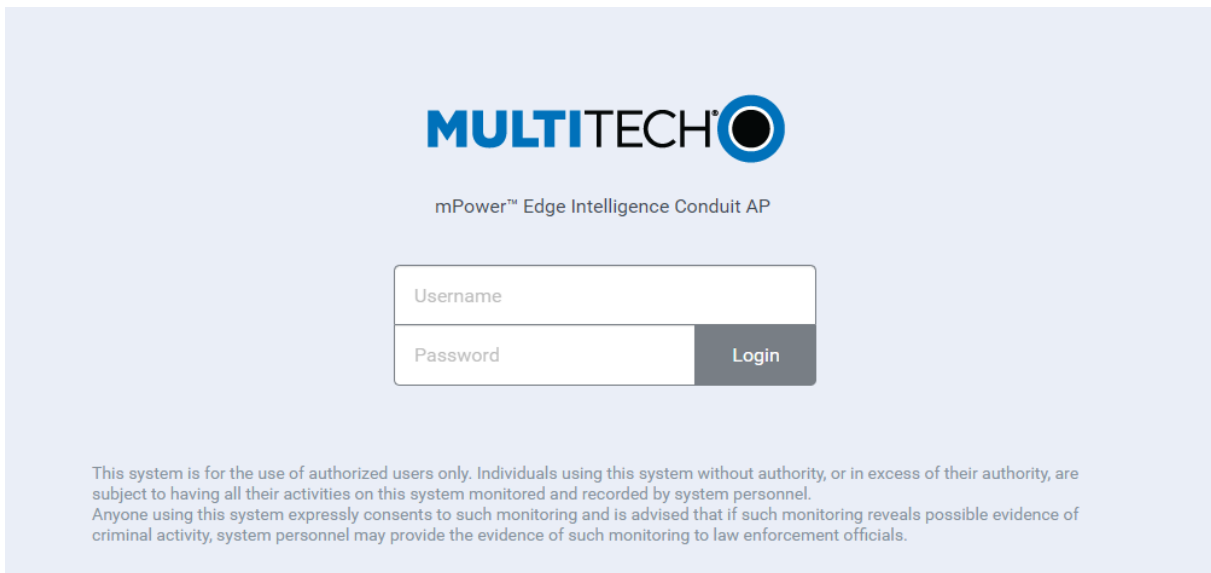


Configuring the MTCAP Gateway for LoRaWAN training

1. Connect Gateway using Ethernet cable to your PC
2. Configure your local network settings if needed. You don't need to set a static IP. DHCP will set it automatically.
3. Run Internet browser and put Lora gateway IP address in browser address bar. Default address is: 192.168.2.1
4. In case where security communicates appear, please select „Continue this website” option
5. To log in, please use following details:
Username: **admin**,
Password: **admin!11**



The screenshot shows the login interface for the MULTITECH mPower™ Edge Intelligence Conduit AP. At the top center is the MULTITECH logo, followed by the device name. Below this is a login form with two input fields: 'Username' and 'Password'. The 'Password' field is followed by a 'Login' button. At the bottom, there is a disclaimer text.

MULTITECH

mPower™ Edge Intelligence Conduit AP

Username

Password

Login

This system is for the use of authorized users only. Individuals using this system without authority, or in excess of their authority, are subject to having all their activities on this system monitored and recorded by system personnel.
Anyone using this system expressly consents to such monitoring and is advised that if such monitoring reveals possible evidence of criminal activity, system personnel may provide the evidence of such monitoring to law enforcement officials.

6. Go to: **LoRaWAN -> Network Settings**

And set everything up as in the screen below.

Channel Plan			
Channel Plan	Additional Channels 1 (MHz)	Duty Cycle Period (min)	
EU868	869,5	60	
Channel Mask	<input type="text"/> <input type="button" value="Edit"/>		

Network			
Network Mode	Join Delay (sec)	Lease Time	Address Range Start
Public LoRaWAN	5	00-00-00	00:00:00:01
NetID	Rx1 Delay (sec)	Queue Size	Address Range End
000000	1	1	FF:FF:FF:FE

Settings			
Tx Power (dBm)	Rx 1 DR Offset	ADR Step (cB)	Min Datarate
10	0	30	0 - SF12BW125
Antenna Gain (dBi)	Rx 2 Datarate	ACK Timeout	Max Datarate
0	0 - SF12BW125	5000	5 - SF7BW125

Database	
Database Path	Trim Rows
/var/config/lora/lora-network-s	100
Backup Interval	Trim Interval
3600	600
<input type="checkbox"/> Reduce Uplink Writes	
<input type="checkbox"/> Skip Field Check	

Network Server Logging		Network Server Testing	
Output to file should be used for debugging only. Reset to SYSLOG for deployments.		<input type="checkbox"/> Disable Join Rx1 <input type="checkbox"/> Disable Rx1	
Log Destination	Log Level	<input type="checkbox"/> Disable Join Rx2 <input type="checkbox"/> Disable Rx2	
SYSLOG	INFO	<input checked="" type="checkbox"/> Disable Duty Cycle <input type="checkbox"/> Disable Strict Counter	
Path	<input type="checkbox"/> Disable GPS		
/var/log/lora-network-server.log			

Server Ports		Payload Broker	
<input type="checkbox"/> Local Only	Network Lead Time	<input checked="" type="checkbox"/> Enabled	
Upstream Port	App Port Up	Hostname	Username
1780	1784	127.0.0.1	
Downstream Port	App Port Down	Port	Password
1782	1786	1883	

7. There are few key parameters in this configuration:

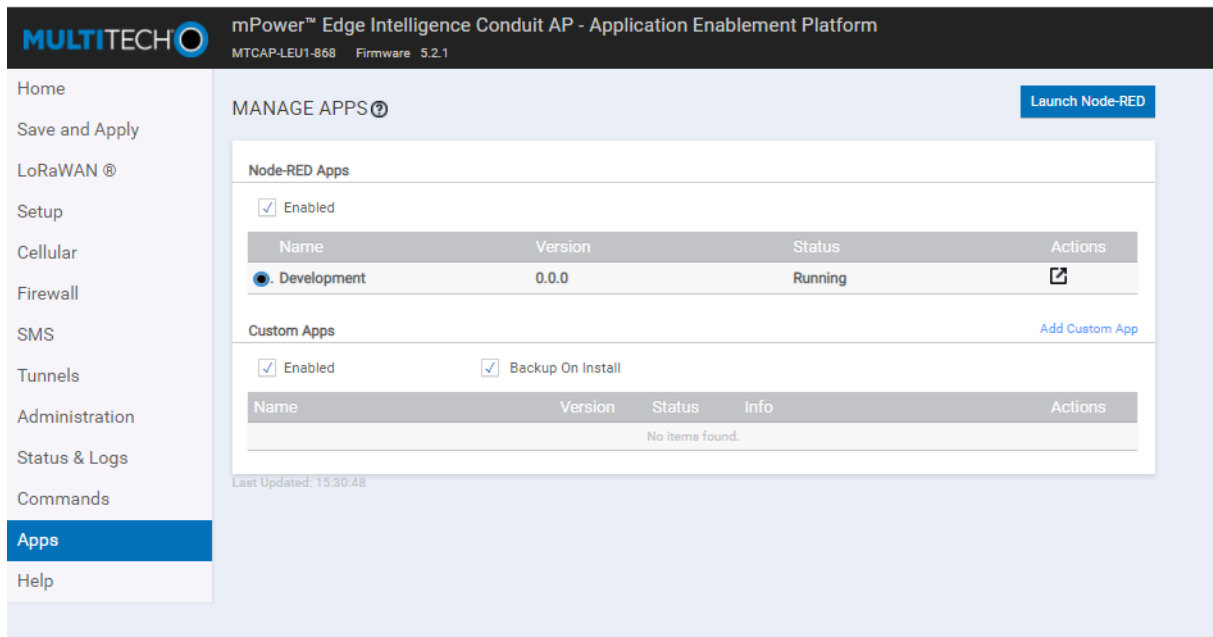
- Channel Plan – **EU686**
- Join Delay (sec) – **5**
- Rx1 Delay (sec) – **1**
- Queue Size – **1**

- Tx Power – **10**
- ACK Timeout – **5000**

Rest of the parameters can be left as default values.

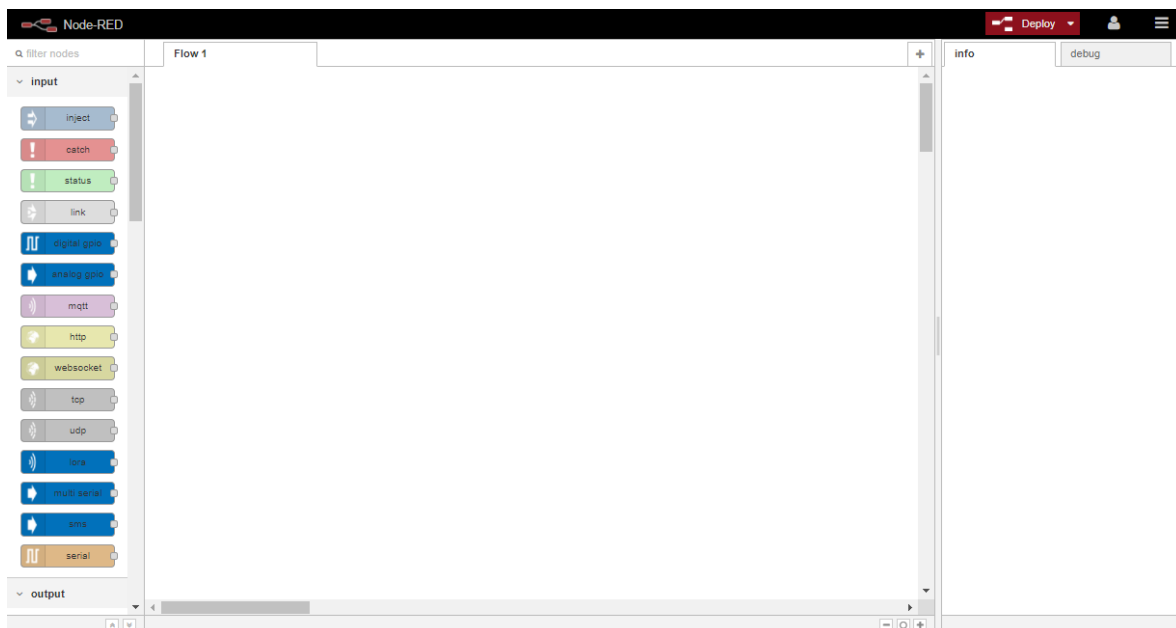
8. Click submit after making all changes, then save it.

9. Go to: **Apps -> Launch Node-RED**

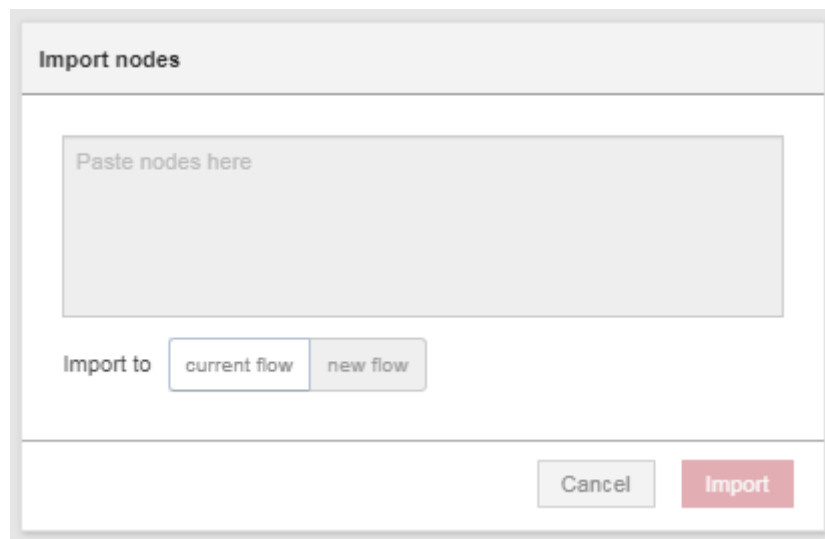


10. In the top right corner, click the "hamburger" icon. Then click:

Import -> Clipboard

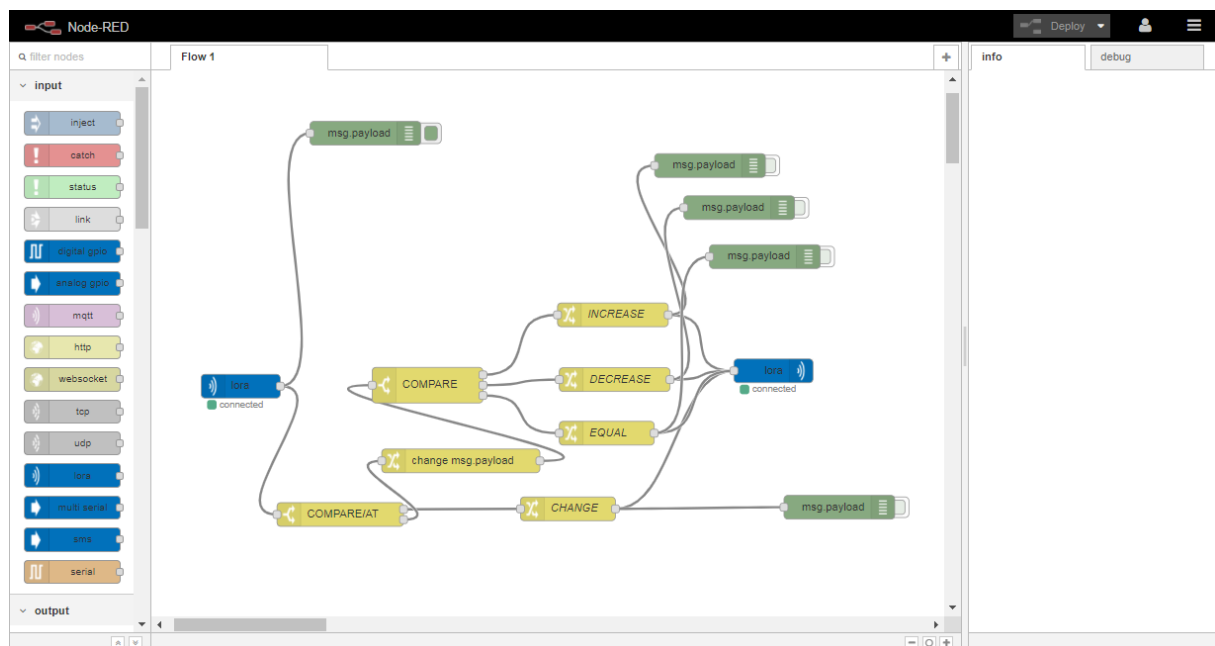


11. You will see the following window:



Paste here the entire contents of the file *"LoRaWan-flow.txt"* file.

12. After clicking the Import button you will see ready flow for a training.



The **blue** nodes are responsible for communication with the network server. Respectively INPUT and OUTPUT.

The **yellow** nodes are mathematically defined by conditions “if something, do something”. For example, if the received temperature is too low, increase the controller setting. They are responsible for the entire logic of the program.

The **green** nodes are used for debugging. On the right side you have the debug tab. There you can see what data is being passed and what is coming from a given node.

13. Now just click DEPLOY and you're done.