Node-RED : Flow 1

127.0.0.1:1880/#flow/5ffc84b9640eb750

Node-RED

Deploy

filter nodes

Flow 1

Edit mqtt in node > Edit debug node > Edit mqtt out node

Delete   Cancel   Done

common
- inject
- debug
- complete
- catch
- status
- link in
- link call
- link out
- comment

function
- function
- switch
- change
- range
- template
- delay
- trigger
- exec
- filter

Properties

Server   Localhost
Topic   IoT/sem6
QoS   Retain
Name   IoT Server

Tip: Leave topic, qos or retain blank if you want to set them via msg properties.

info

Search flows

Flows
- Flow 1
  - IoT/sem6
  - MQTT output
  - IoT Server
  - MQTT output? 1
- Subflows
- Global Configuration Nodes

IoT Server
Node   "0dbb72ce5eaed87f"
Type   mqtt out
show more

message?

Search for nodes using ctrl-f

IoT/sem6
connected

MQTT output

MQTT output?
connected

IoT Server
connected

7:10 PM
3/31/25

Enabled

Node-RED : Flow 1

127.0.0.1:1880/#flow/5ffc84b9640eb750

Node-RED

Deploy

filter nodes

Flow 1

Edit mqtt in node > Edit debug node > Edit mqtt out node > Edit inject node

Delete   Cancel   Done

common
- inject
- debug
- complete
- catch
- status
- link in
- link call
- link out
- comment

function
- function
- switch
- change
- range
- template
- delay
- trigger
- exec
- filter

Properties

Name   MQTT output?

msg. payload   =   {}   {"message": "Helow!"}
msg. topic   =   IoT/sem6

+ add   inject now

Inject once after 0.1 seconds, then

Repeat   none

info

Search flows

Flows
- Flow 1
  - IoT/sem6
  - MQTT output
  - IoT Server
  - MQTT output? 1
- Subflows
- Global Configuration Nodes

MQTT output? 1
Node   "b6db28e28caf7af7"
Type   inject
show more

Hold down when you click on a node to also select all of its connected nodes

IoT/sem6
connected

MQTT output

MQTT output?
connected

IoT Server
connected

7:11 PM
3/31/25

Enabled

~ : node-red — Konsole

New Tab   Split View   Copy   Paste   Find...

~ : node-red   ~ : mosquitto

31 Mar 19:03:45 - [info] Flows file   : /home/fishy/.node-red/flows.json
31 Mar 19:03:45 - [warn]

Your flow credentials file is encrypted using a system-generated key.

If the system-generated key is lost for any reason, your credentials
file will not be recoverable, you will have to delete it and re-enter
your credentials.

You should set your own key using the 'credentialSecret' option in
your settings file. Node-RED will then re-encrypt your credentials
file using your chosen key the next time you deploy a change.
----
31 Mar 19:03:45 - [info] Server now running at http://127.0.0.1:1880/
31 Mar 19:03:45 - [info] Starting flows
31 Mar 19:03:45 - [info] Started flows
31 Mar 19:03:45 - [info] [mqtt-broker:Localhost] Connection failed to broker: mqtt://localhost:1883
31 Mar 19:04:00 - [info] [mqtt-broker:Localhost] Connection failed to broker: mqtt://localhost:1883
31 Mar 19:04:55 - [info] [mqtt-broker:Localhost] Connected to broker: mqtt://localhost:1883
31 Mar 19:11:55 - [info] [debug:MQTT output]
{ message: 'Helow!' }
31 Mar 19:12:04 - [info] [debug:MQTT output]
{ message: 'Helow!' }

First screenshot — Node-RED

IoT MQTT Flow

Filter nodes

common: inject, debug, complete, catch, status, link in, link call, link out, comment

function: function, switch, change, range, template, delay, trigger, exec, filter

network

Nodes:
- Sector1 Sub → Sector1 Log (connected)
- Sector2 Sub → Sector2 Log (connected)
- Sector3 Sub → Sector3 Log (connected)
- Sector4 Sub → Sector4 Log (connected)
- → Sector File Debugger
- Traffic Input → CongestedTraffic → Traffic Pub (connected)
- Sanitation Input → Sanitation Status → Sanitation Pub (connected)
- Security Input → Security Status → Security Pub (connected)
- Crowd Input → Crowd Status → Crowd Pub (connected)
- Medical Input → Medical Status → Medical Pub (connected)
- Logistics Input → Logistics Status → Logistics Pub (connected)
- Global Announcement → Format Message → Global Pub (connected)
- Global Sub → Global Log → Global Message Log (connected)
- Security Sub → Security Log (connected)
- Sanitation Sub → Sanitation Log (connected)
- Crowd Sub → Crowd Log (connected)
- Medical Sub → Medical Log (connected)
- Logistics Sub → Logistics Log (connected)

debug — all nodes — all

3/31/2025, 8:20:13 PM
msg : string[567]
"##-----------------------------------Your
flow credentials file is encrypted
using a system-generated key.↵If the
system-generated key is lost for any
reason, your credentials↵file will not
be recoverable, you will have to delete
it and re-enter↵your credentials.↵You
should set your own key using the
'credentialSecret' option in↵your
settings file. Node-RED will then re-
encrypt your credentials↵file using
your chosen key the next time you
deploy a change.↵-----------------------
-------↵#"

3/31/2025, 8:28:57 PM node: Sector File Debugger
kumbhmela/sectors/sector1traffic : msg.payload : Object
▶ { status: "Congested", vehicles: 50,
time: "2025-03-31T14:56:56.972Z" }

3/31/2025, 8:28:57 PM node: Sector File Debugger
kumbhmela/sectors/sector1sanitation : msg.payload : Object
▶ { bins_emptied: 12, issues_reported: 2
}

3/31/2025, 8:28:59 PM node: Sector File Debugger
kumbhmela/sectors/sector1security : msg.payload : Object
▶ { alerts: 0, patrols_active: 5 }

3/31/2025, 8:28:59 PM node: Sector File Debugger
kumbhmela/sectors/sector1crowd : msg.payload : Object
▶ { density: "medium", headcount: 450 }

3/31/2025, 8:27:00 PM node: Sector File Debugger
kumbhmela/sectors/sector1medical : msg.payload : Object
▶ { emergencies: 1,
ambulances_available: 3 }

3/31/2025, 8:27:00 PM node: Sector File Debugger
kumbhmela/sectors/sector1logistics : msg.payload : Object
▶ { deliveries_pending: 4,
vehicles_ready: 8 }

Second screenshot — Node-RED

IoT MQTT Flow

common: inject, debug, complete, catch, status, link in, link call, link out, comment

function: function, switch, change, range, template, delay, trigger, exec, filter

Nodes:
- Sector1 Sub → Sector1 Log (connected)
- Sector2 Sub → Sector2 Log (connected)
- Sector3 Sub → Sector3 Log (connected)
- Sector4 Sub → Sector4 Log (connected)
- → Sector File Debugger
- Traffic Input → CongestedTraffic → Traffic Pub (connected)
- Sanitation Input → Sanitation Status → Sanitation Pub (connected)
- Security Input → Security Status → Security Pub (connected)
- Crowd Input → Crowd Status → Crowd Pub (connected)
- Global Announcement → Format Message → Global Pub (connected)
- Global Sub → Global Log → Global Message Log (connected)
- Security Sub → Security Log (connected)
- Sanitation Sub → Sanitation Log (connected)
- Crowd Sub → Crowd Log (connected)
- Medical Sub → Medical Log (connected)
- Logistics Sub → Logistics Log (connected)
- → Domain File Debugger
- Medical Input → Medical Status → Medical Pub (connected)
- Logistics Input → Logistics Status → Logistics Pub (connected)

debug — all nodes — all

3/31/2025, 8:20:13 PM
msg : string[567]
"##-----------------------------------Your
flow credentials file is encrypted
using a system-generated key.↵If the
system-generated key is lost for any
reason, your credentials↵file will not
be recoverable, you will have to delete
it and re-enter↵your credentials.↵You
should set your own key using the
'credentialSecret' option in↵your
settings file. Node-RED will then re-
encrypt your credentials↵file using
your chosen key the next time you
deploy a change.↵-----------------------
-------↵#"

Sector1 Sub — connected
Sector2 Sub — connected
Sector3 Sub — connected
Sector4 Sub — connected

Sector1 Log
Sector2 Log
Sector3 Log
Sector4 Log

Sector File Debugger

Security Sub — connected
Sanitation Sub — connected
Crowd Sub — connected
Medical Sub — connected
Logistics Sub — connected

Security Log
Sanitation Log
Crowd Log
Medical Log
Logistics Log

Domain File Debugger

```
≡ sector1.txt  ✕
≡ sector1.txt
  1   {"status":"Congested","vehicles":50,"time":"2025-03-31T14:26:34.219Z"}
  2   {"status":"Congested","vehicles":50,"time":"2025-03-31T14:29:25.845Z"}
  3   {"status":"Congested","vehicles":50,"time":"2025-03-31T14:29:32.206Z"}
  4   {"status":"Congested","vehicles":50,"time":"2025-03-31T14:29:32.898Z"}
  5   {"status":"Congested","vehicles":50,"time":"2025-03-31T14:43:56.151Z"}
  6   {"bins_emptied":12,"issues_reported":2}
  7   {"alerts":0,"patrols_active":5}
  8   {"density":"medium","headcount":450}
  9   {"emergencies":1,"ambulances_available":3}
 10   {"deliveries_pending":4,"vehicles_ready":8}
 11   {"status":"Congested","vehicles":50,"time":"2025-03-31T14:44:17.157Z"}
 12   {"bins_emptied":12,"issues_reported":2}
 13   {"alerts":0,"patrols_active":5}
 14   {"density":"medium","headcount":450}
 15   {"emergencies":1,"ambulances_available":3}
 16   {"deliveries_pending":4,"vehicles_ready":8}
 17
```