

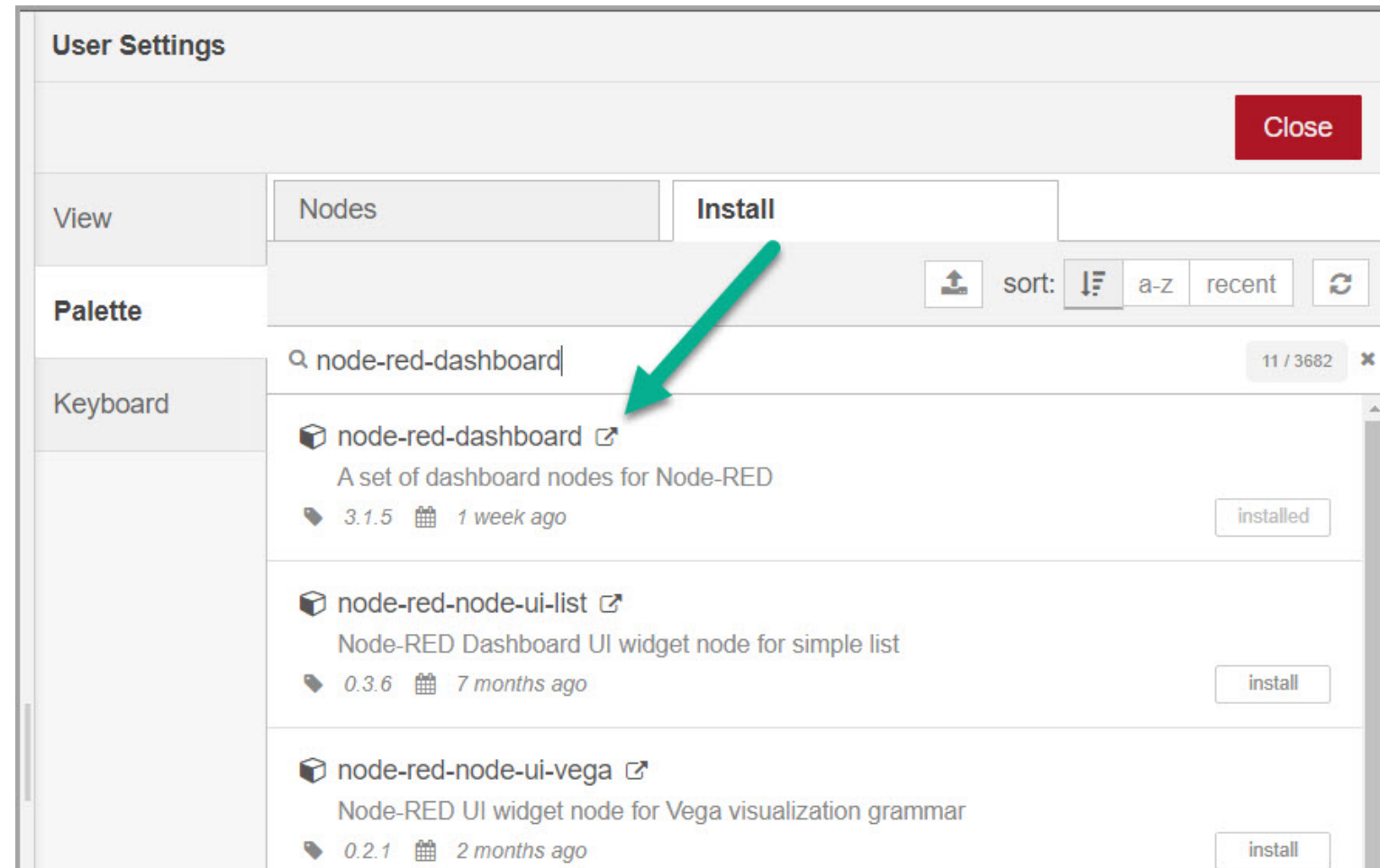
# **Production Supporting Systems in Factories**

**ระบบสนับสนุนการผลิตในโรงงานอุตสาหกรรม**

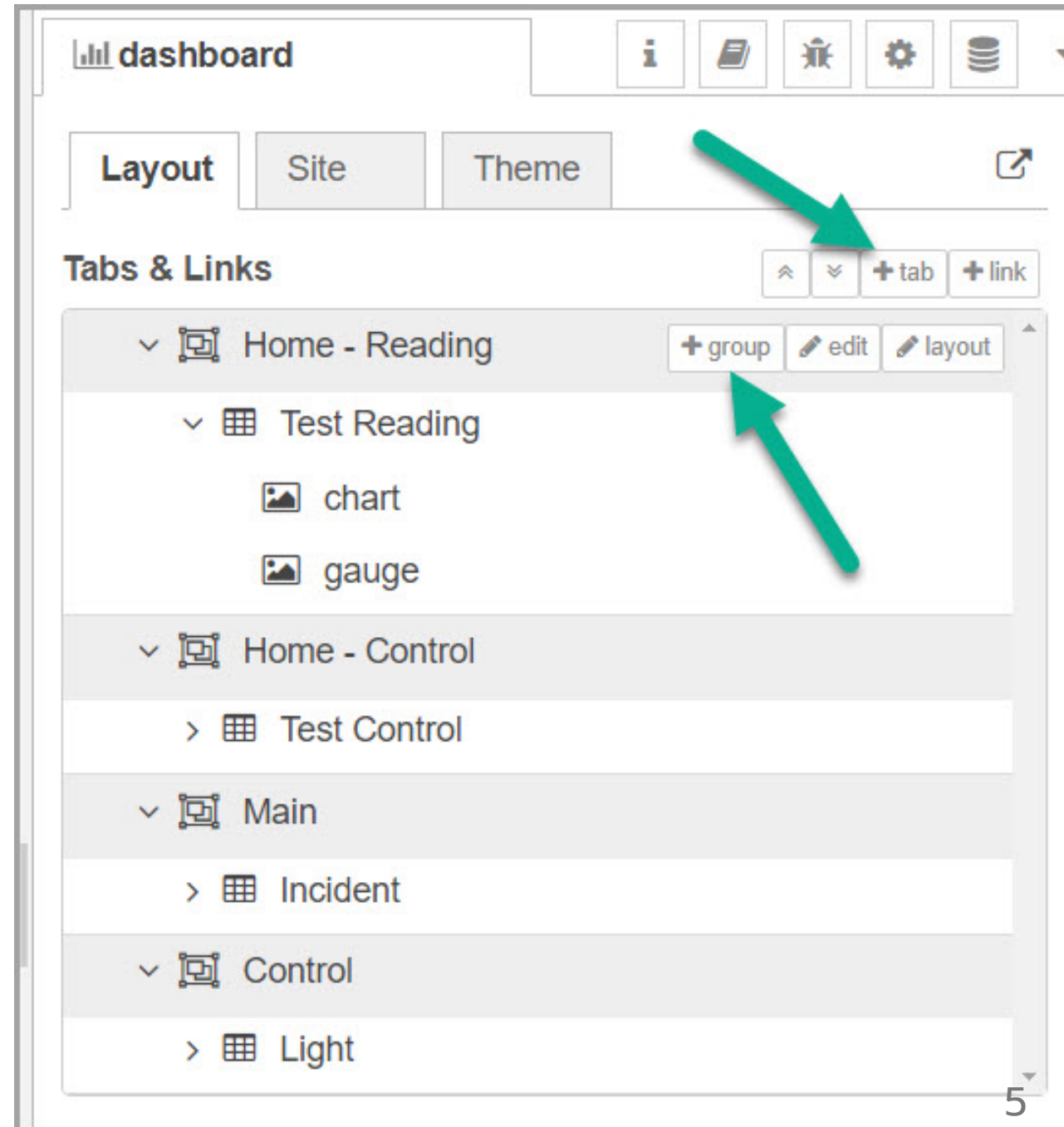
# Dashboard

# **Module 5-1: Dashboard display**

- Go to Manage palette
- Install node-red-dashboard

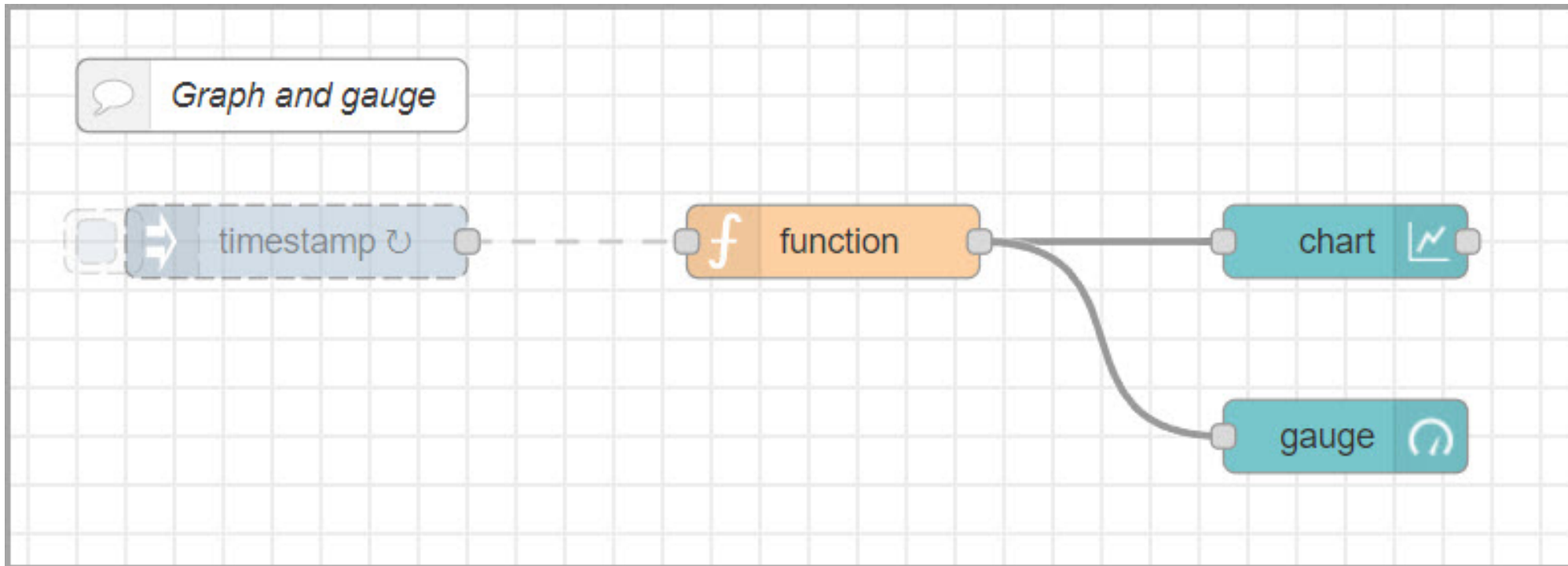


- Go to **Dashboard** tab
- Click **+ tab**
  - Edit tab information
- Click **+ group**
  - Edit group information



- Flow

- inject , function , chart , gauge



- inject node

### Edit inject node

Delete Cancel Done

#### Properties

Name

msg. payload = timestamp

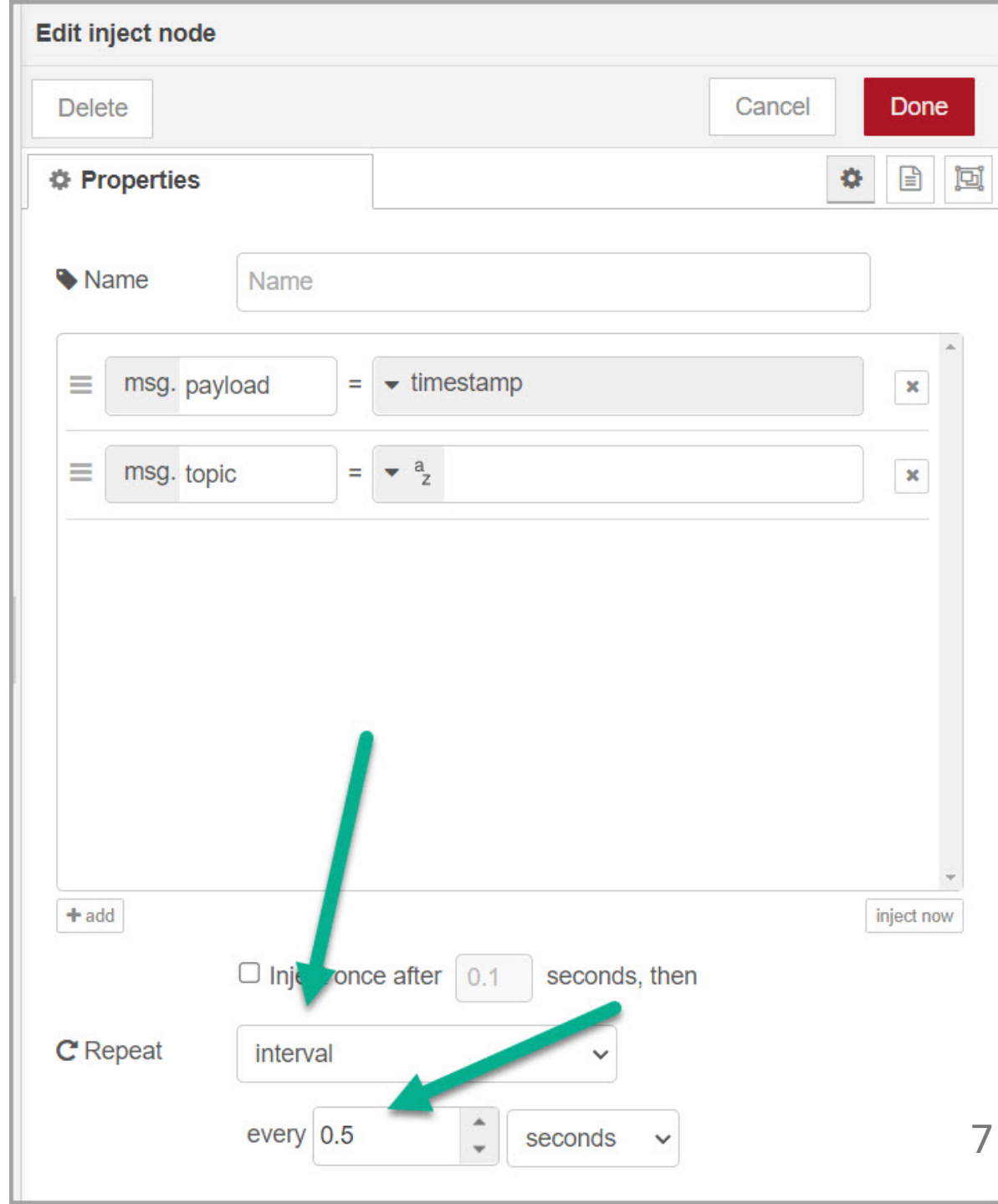
msg. topic = a<sub>z</sub>

+ add inject now

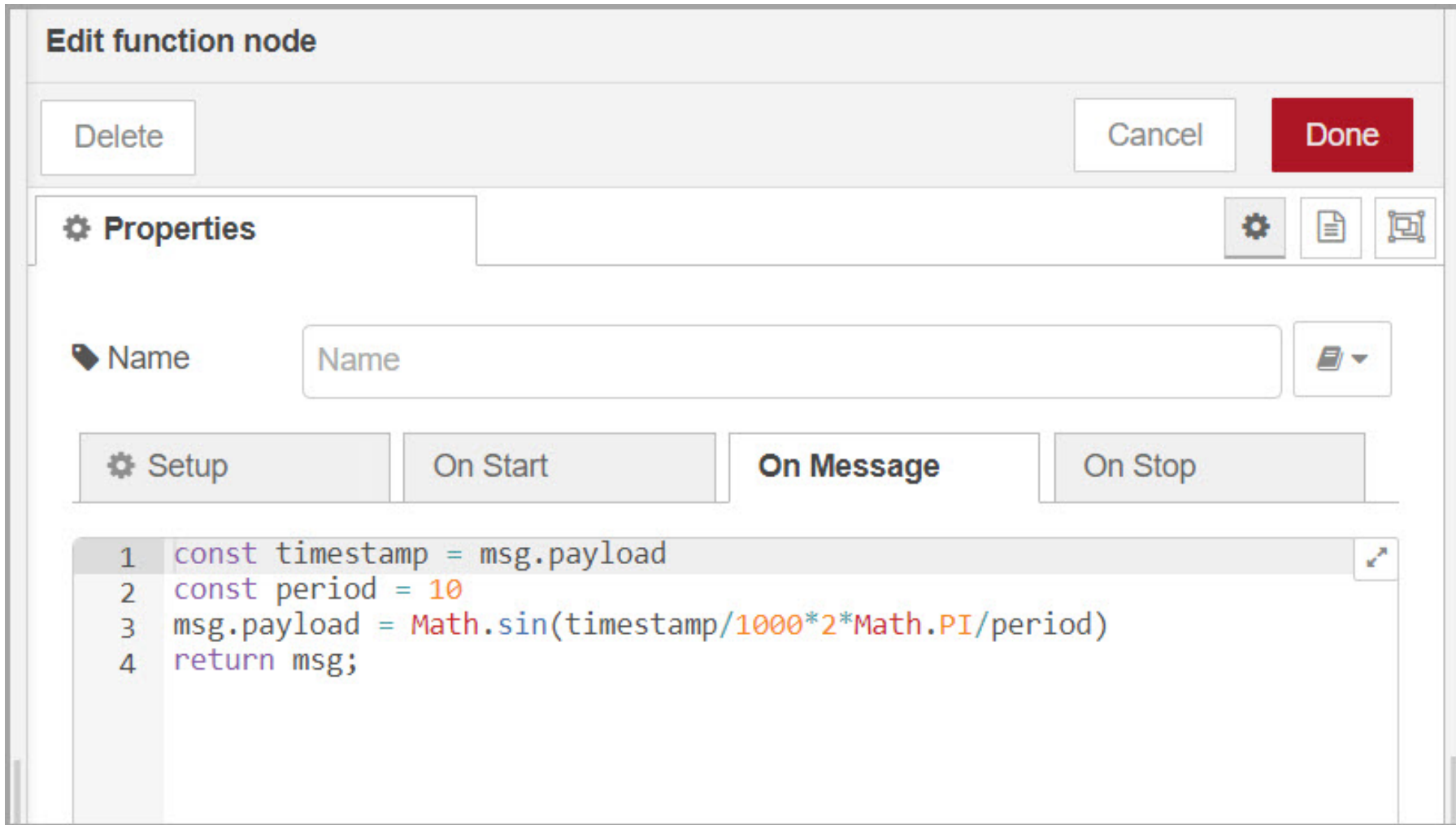
☐ Inject once after 0.1 seconds, then

Repeat interval

every 0.5 seconds



- `function` node (code on the next page)





```
const timestamp = msg.payload;  
const period = 10;  
msg.payload = Math.sin(((timestamp / 1000) * 2 * Math.PI) / period);  
return msg;
```

- chart node

**Edit chart node**

Delete Cancel Done

**Properties**

Group [Home - Reading] Test Reading

Size auto

Label chart

Type Line chart ☐ enlarge points

X-axis last 1 minutes OR 1000 points

X-axis Label HH:mm:ss ☐ as UTC

Y-axis min max

Legend None Interpolate linear

- gauge node

**Edit gauge node**

Delete Cancel Done

**Properties**

Group [Home - Reading] Test Reading

Size auto

Type Gauge

Label gauge

Value format {{value}}

Units units

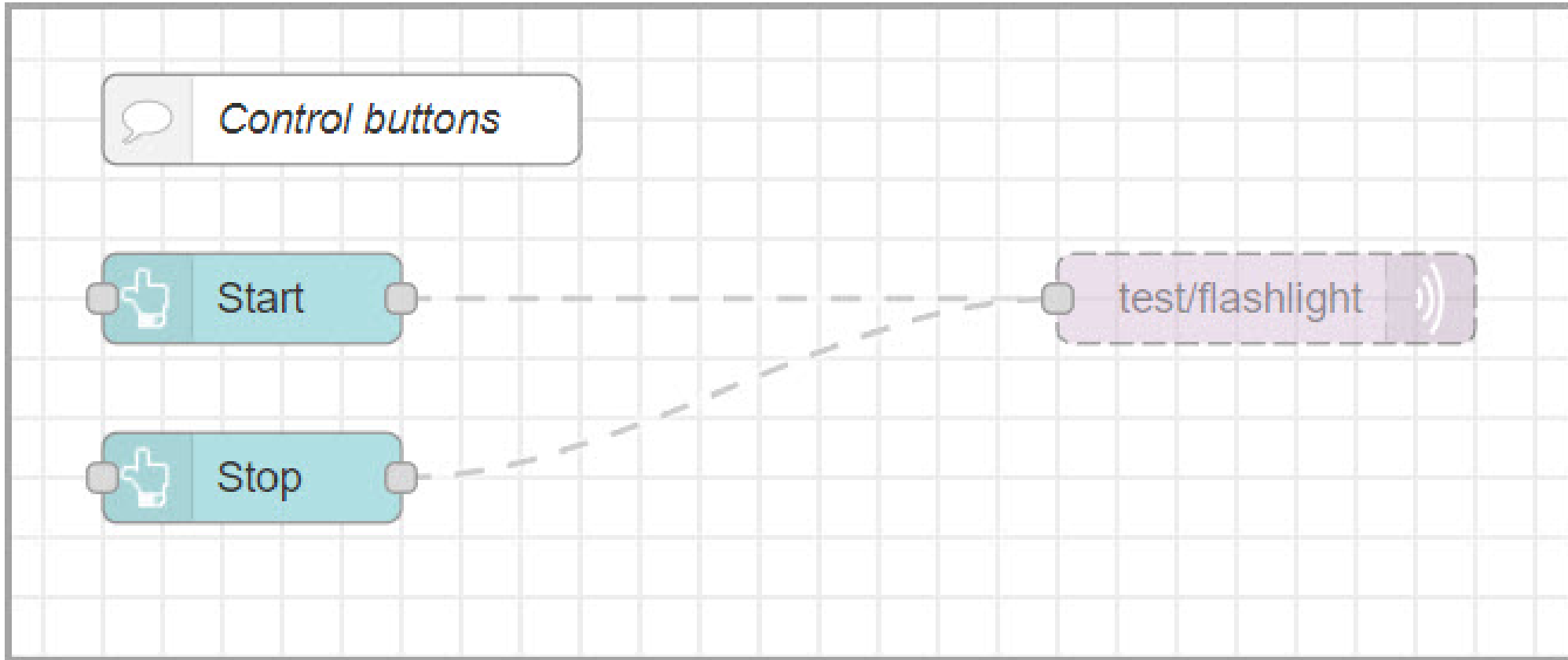
Range min -1 max 1

Colour gradient

# **Module 5-2: Control**

- Flow

- button , mqtt out



- button Start

### Edit button node

Delete Cancel Done

#### Properties

Group [Home - Control] Test Control

Size auto

Icon optional icon

Label Start

Tooltip optional tooltip

Color optional text/icon color

Background green

When clicked, send:

Payload  $\text{a}_z$  start

Topic msg. topic

→ If msg arrives on input, emulate a button click: ☐

- button Stop

### Edit button node

Delete Cancel Done

#### Properties

Group [Home - Control] Test Control

Size auto

Icon optional icon

Label Stop

Tooltip optional tooltip

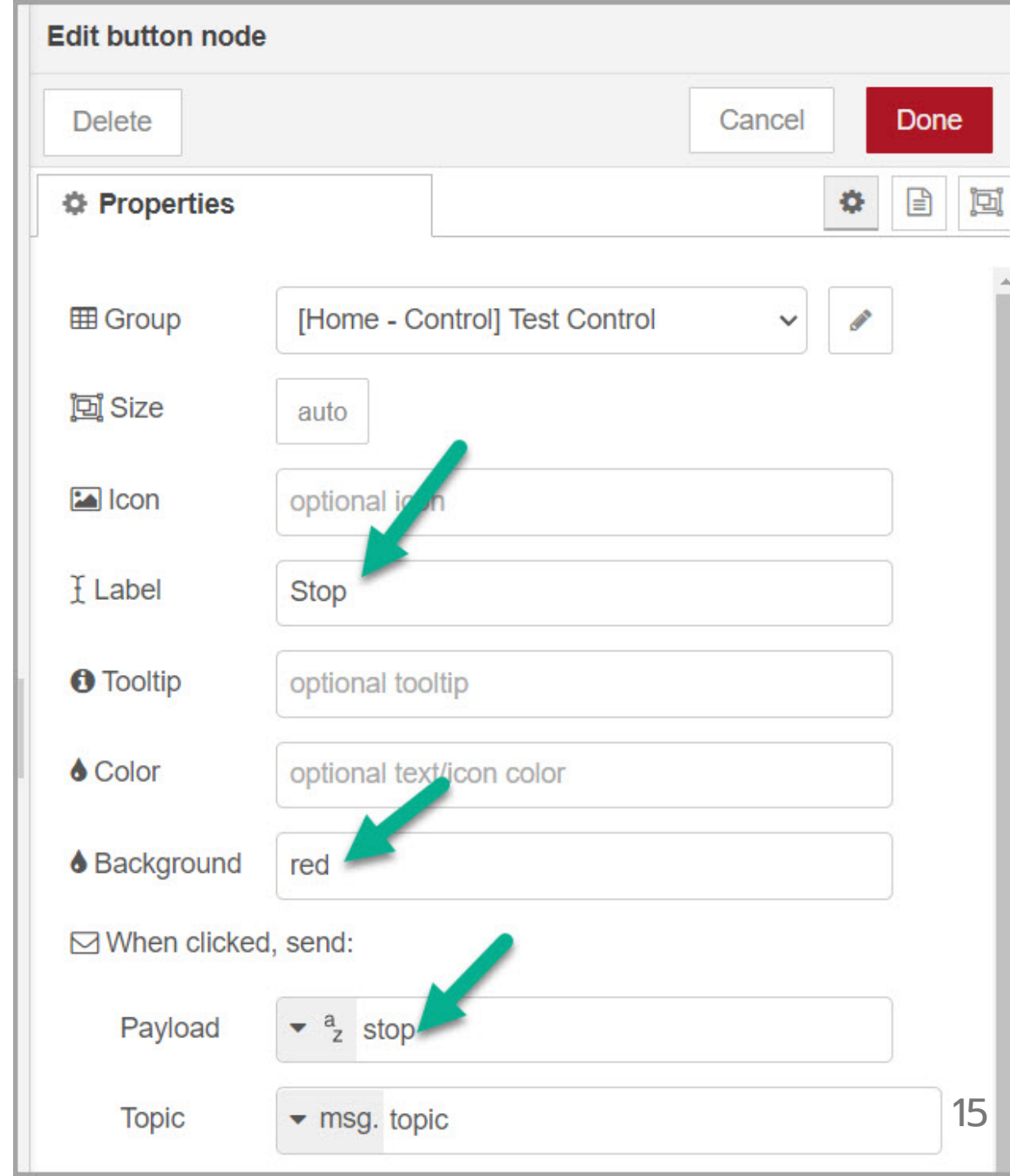
Color optional text/icon color

Background red

When clicked, send:

Payload  $a_z$  stop

Topic msg. topic



- mqtt out node

**Edit mqtt out node**

Delete Cancel Done

**Properties**

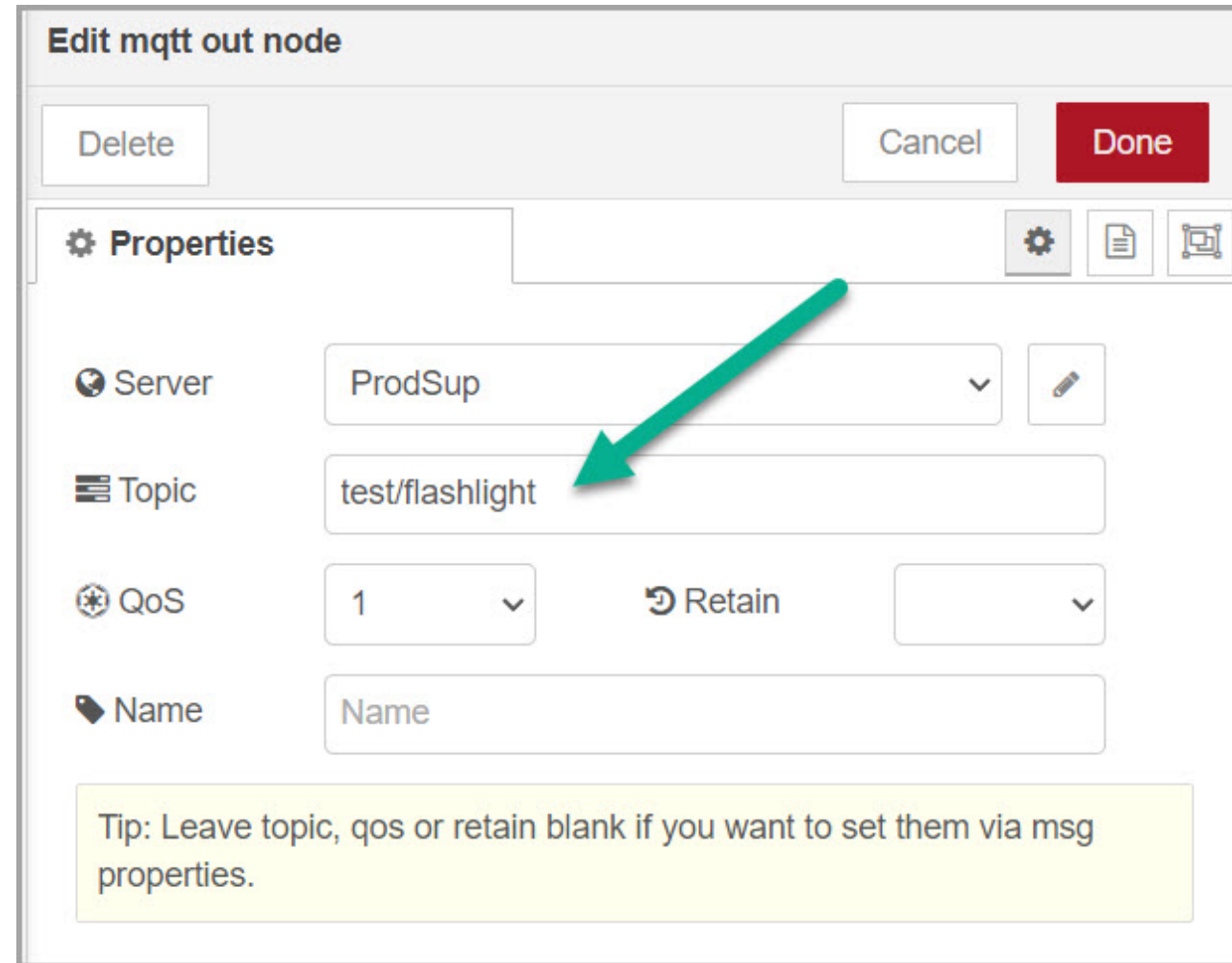
Server ProdSup

Topic test/flashlight

QoS 1 Retain

Name Name

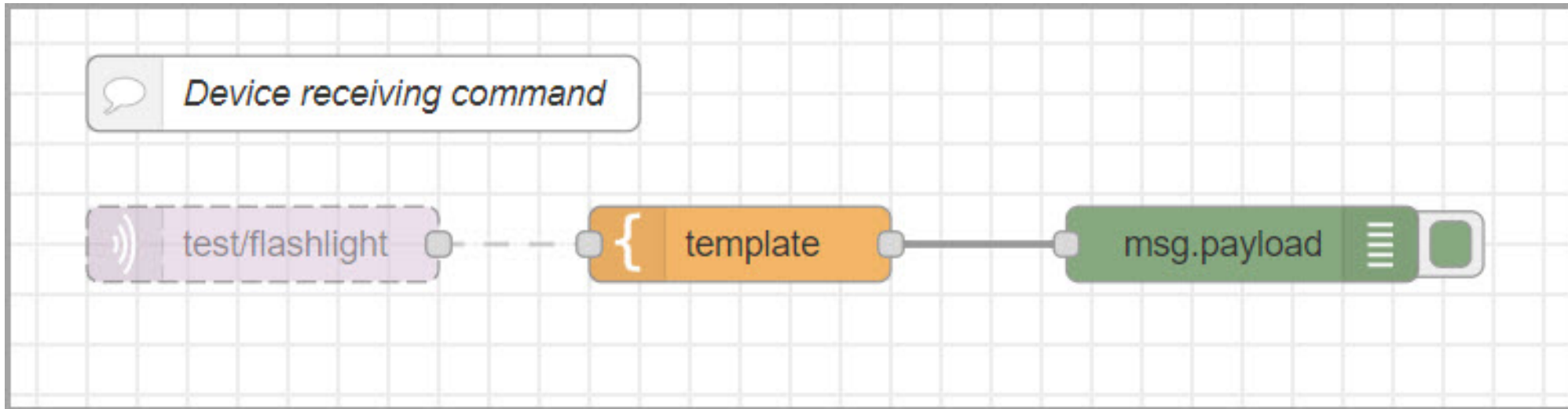
Tip: Leave topic, qos or retain blank if you want to set them via msg properties.

The image shows a software interface for editing an MQTT output node. At the top, there's a title bar 'Edit mqtt out node' and three buttons: 'Delete', 'Cancel', and 'Done'. Below this is a 'Properties' section with a gear icon and three sub-icons (gear, document, and a node icon). The properties are listed as follows: 'Server' is a dropdown menu showing 'ProdSup'; 'Topic' is a text input field containing 'test/flashlight', with a green arrow pointing to it; 'QoS' is a dropdown menu showing '1'; 'Retain' is a checkbox that is currently unchecked; and 'Name' is a text input field containing 'Name'. At the bottom, there is a yellow tip box that reads: 'Tip: Leave topic, qos or retain blank if you want to set them via msg properties.'



- flow

- mqtt in , template , debug



- mqtt in node

**Edit mqtt in node**

Delete Cancel Done

**Properties**

Server ProdSup

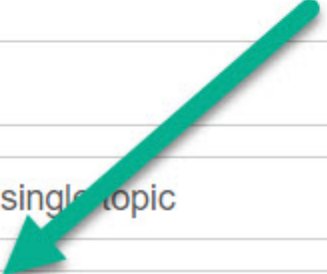
Action Subscribe to single topic

Topic test/flashlight

QoS 1

Output auto-detect (string or buffer)

Name Name



- `template` node

### Edit template node

Delete

Cancel

Done

⚙ Properties

⚙

📄

🔗

🏷 Name

📄 ▼

⋮ Property

▼ msg. payload

📄 Template

Syntax Highlight: 

mustache

 ▼

↗

1

I will {{payload}} now !