

How to Build Node-RED –Dashboard, Email

APPLICATION INTERFACE CONTROLLER

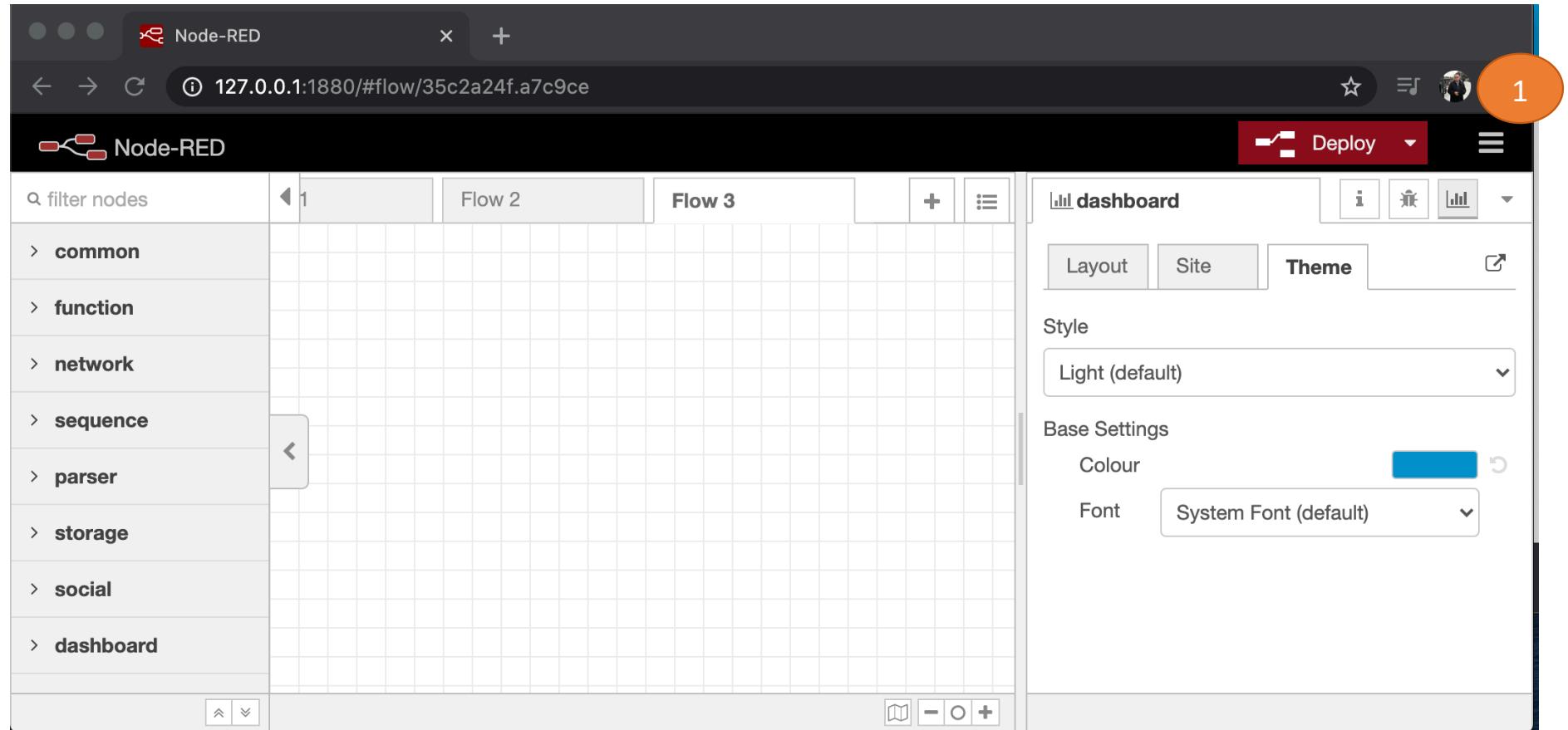
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SEMESTER JAN 2020

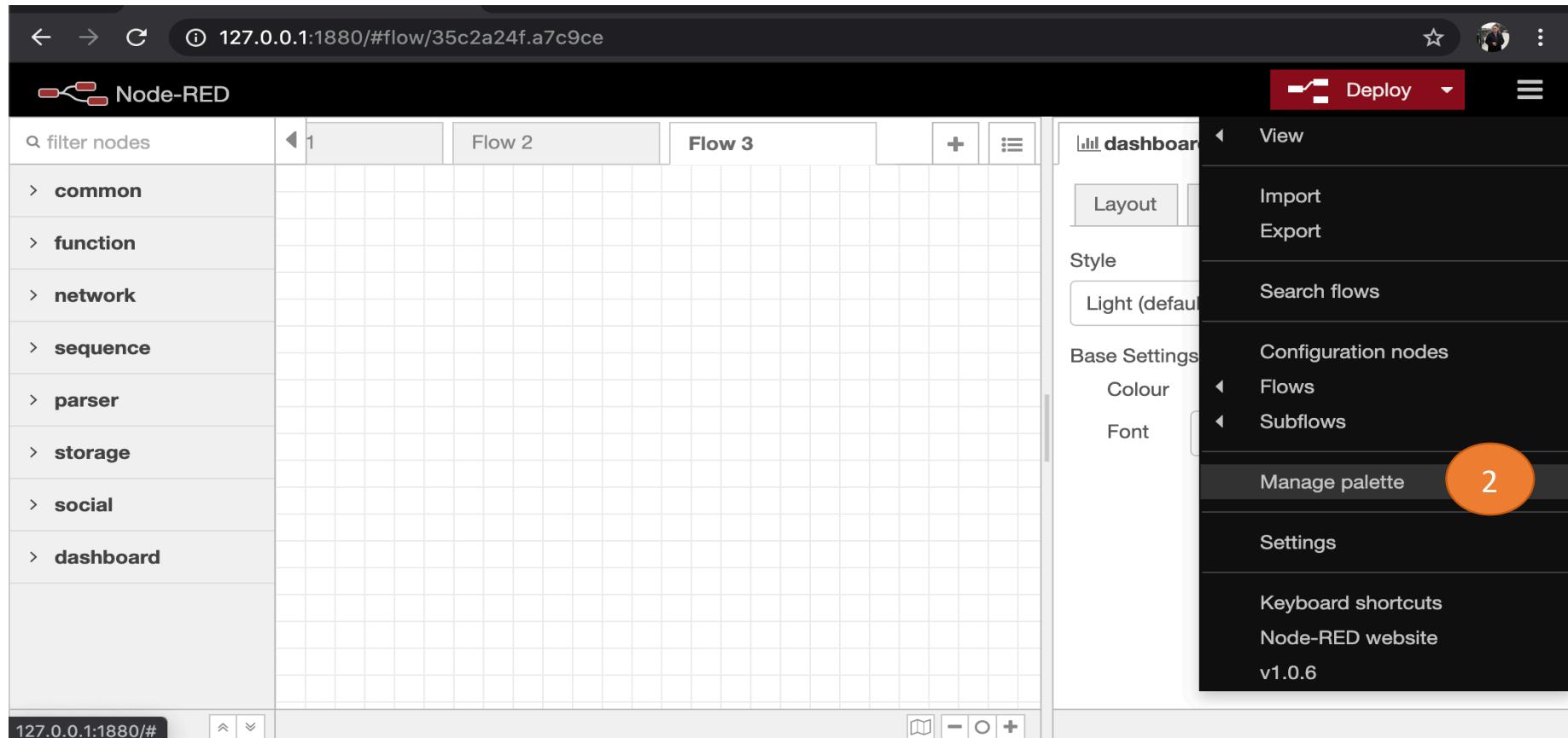
Safyzan Salim



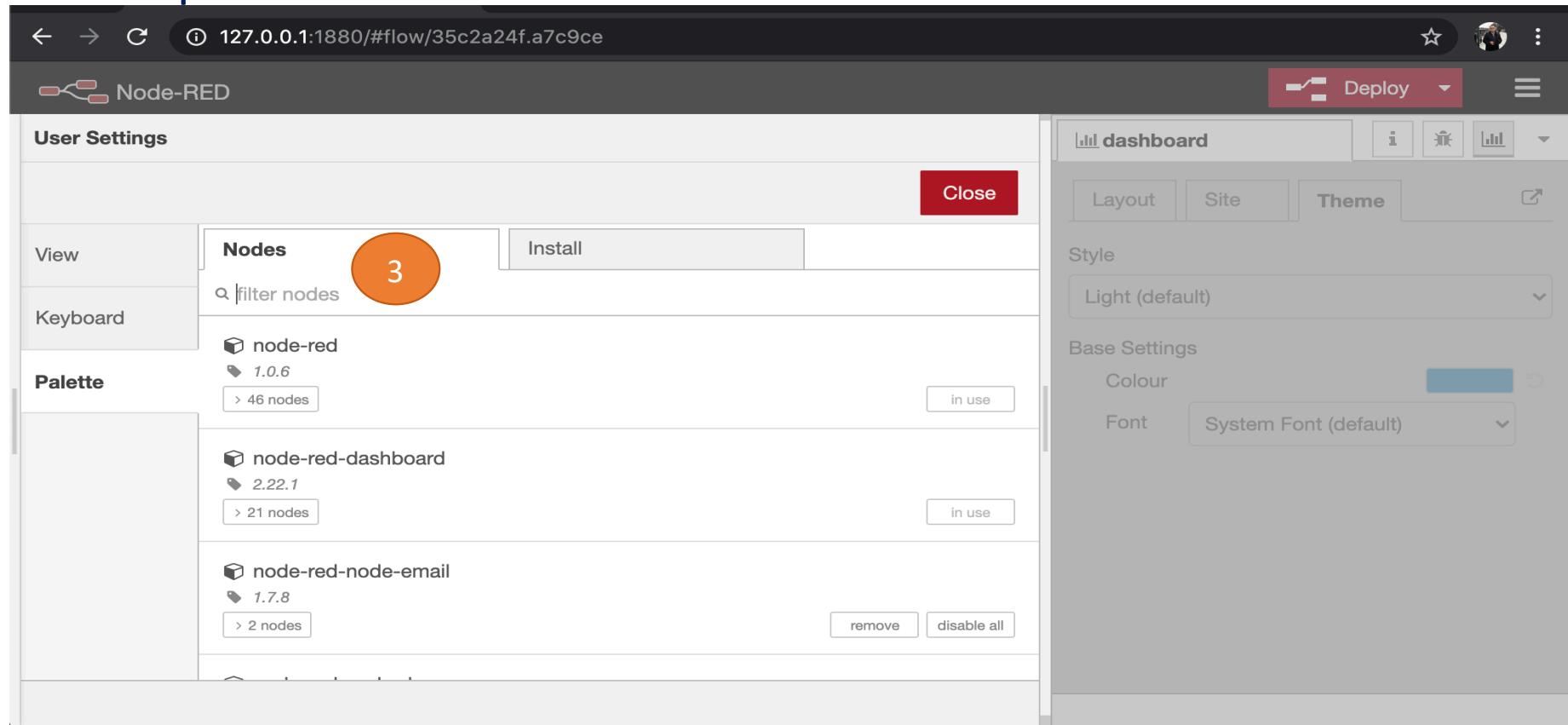
1. Go to menu to install Dashboard palette.



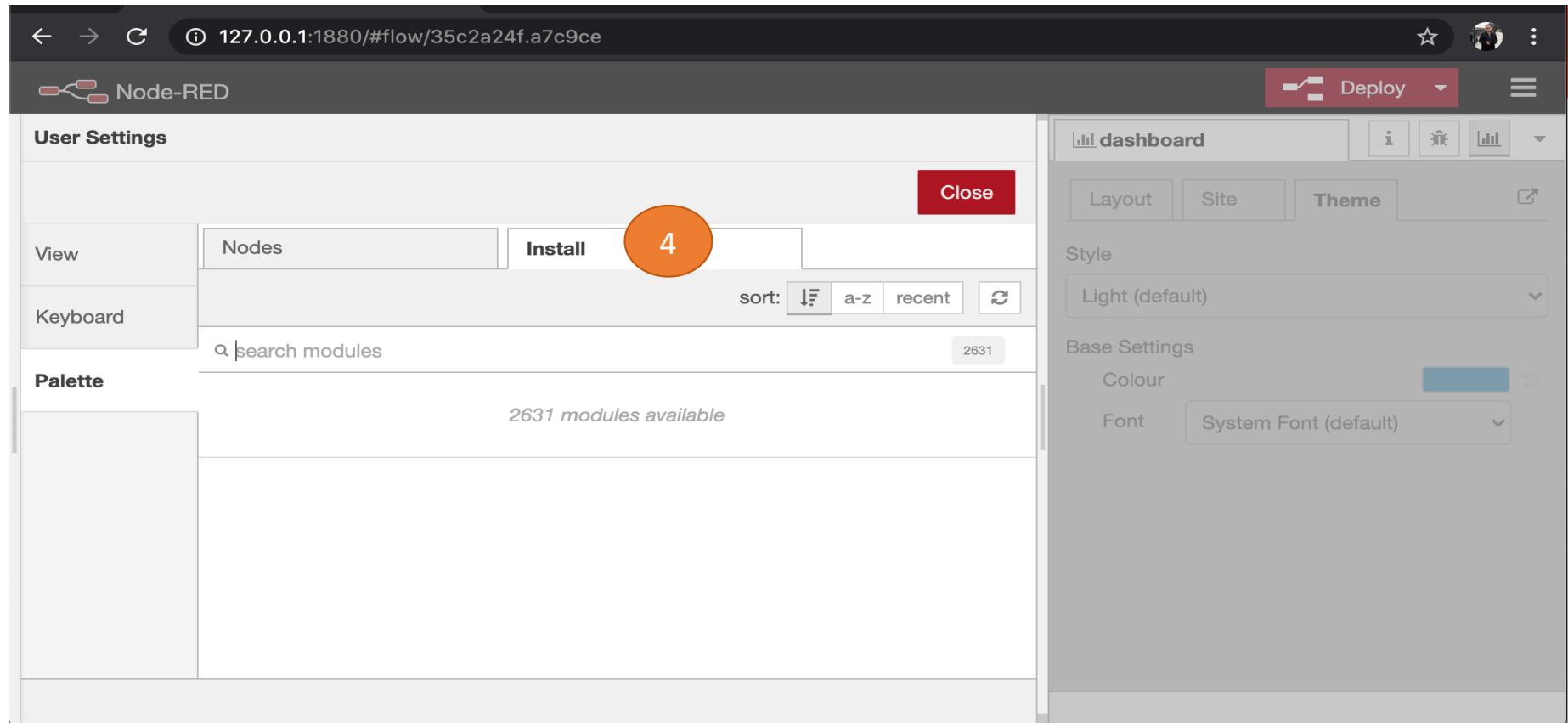
2. Select Manage palette.



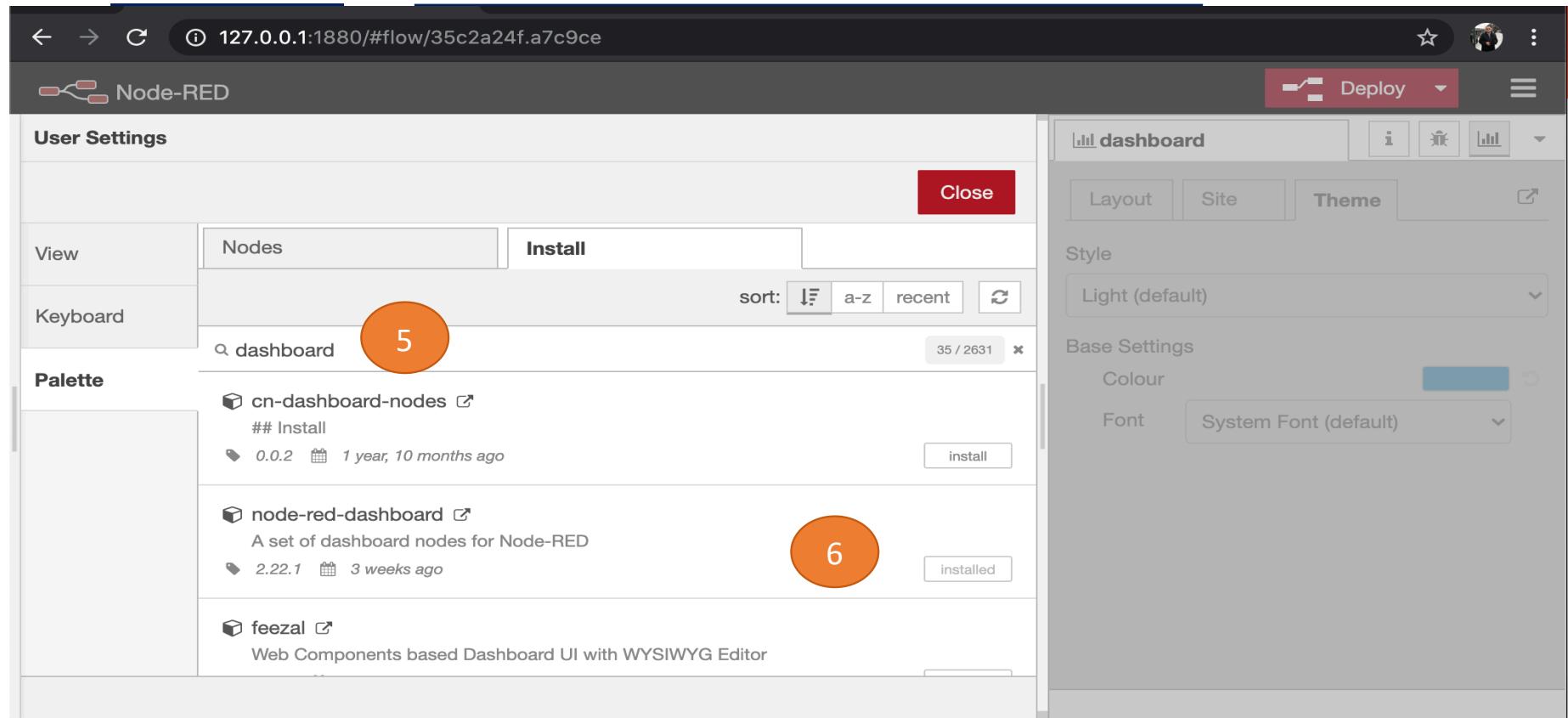
3. Nodes tab shows Installed and in use palette. User can also remove the unwanted palette from this tab.



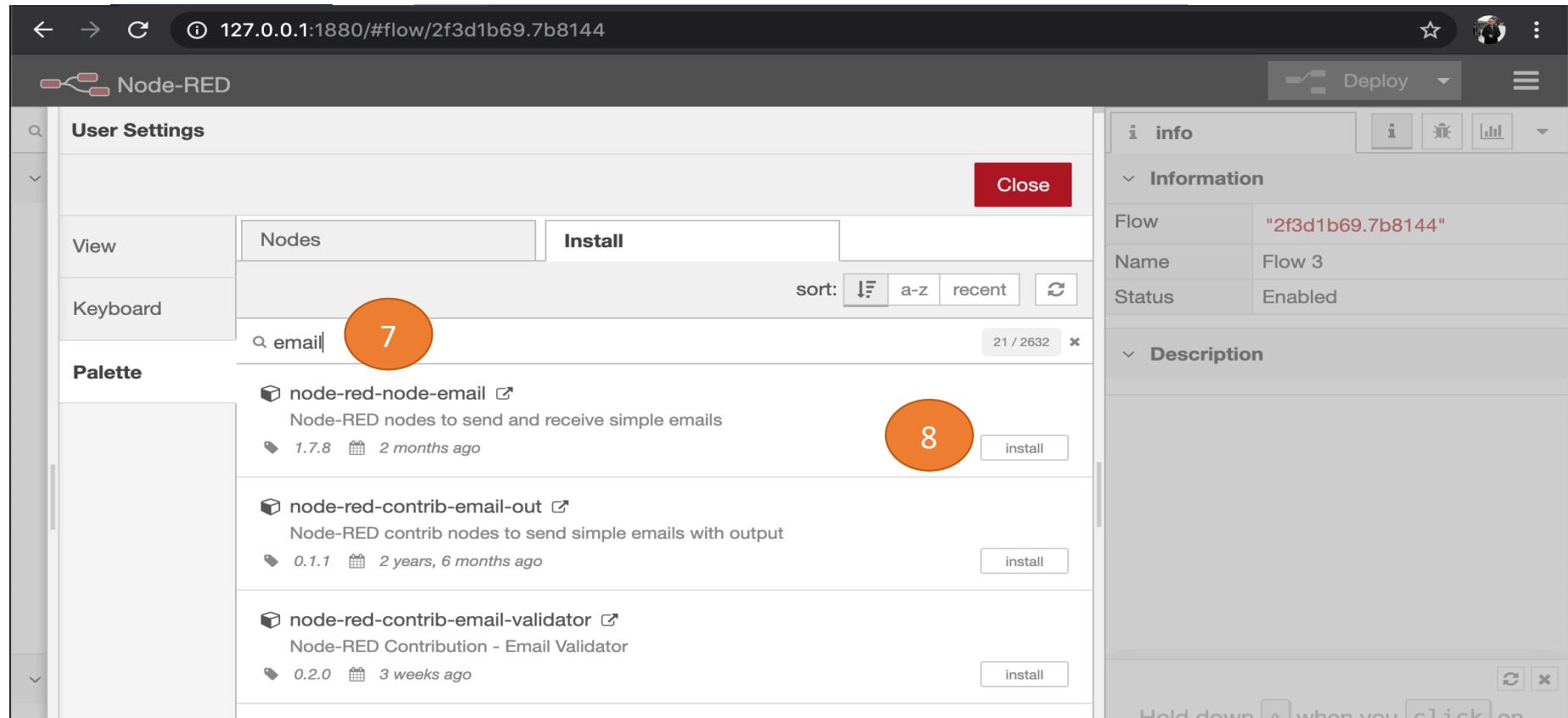
4. Install tab is used to search and install new palette.



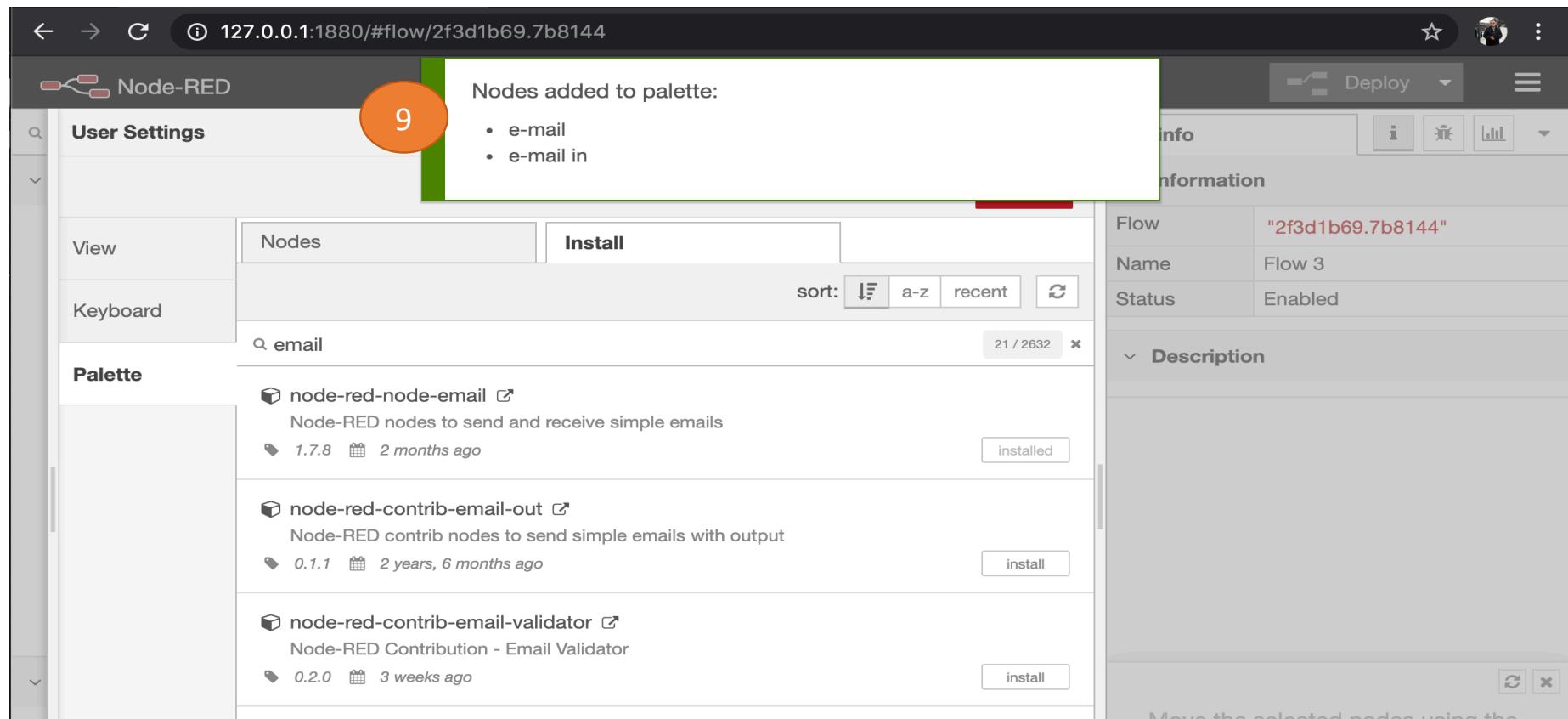
5. Go to search module and type dashboard.
6. Click the install box of node-red-dashboard version 2.22.1



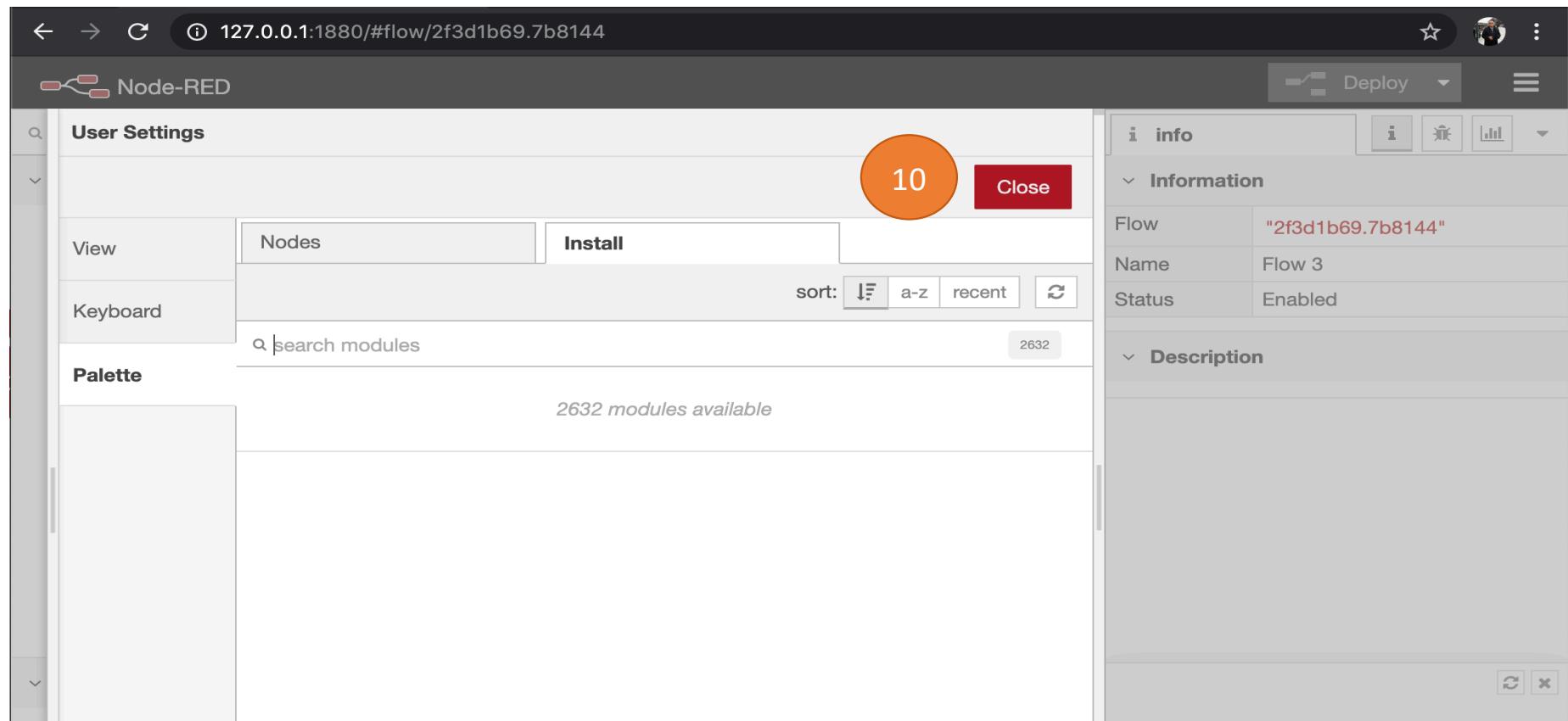
7. E.g., Adding email palette – type email at search module.
8. Click the *install* box of *node-red-node-email* version 1.7.8



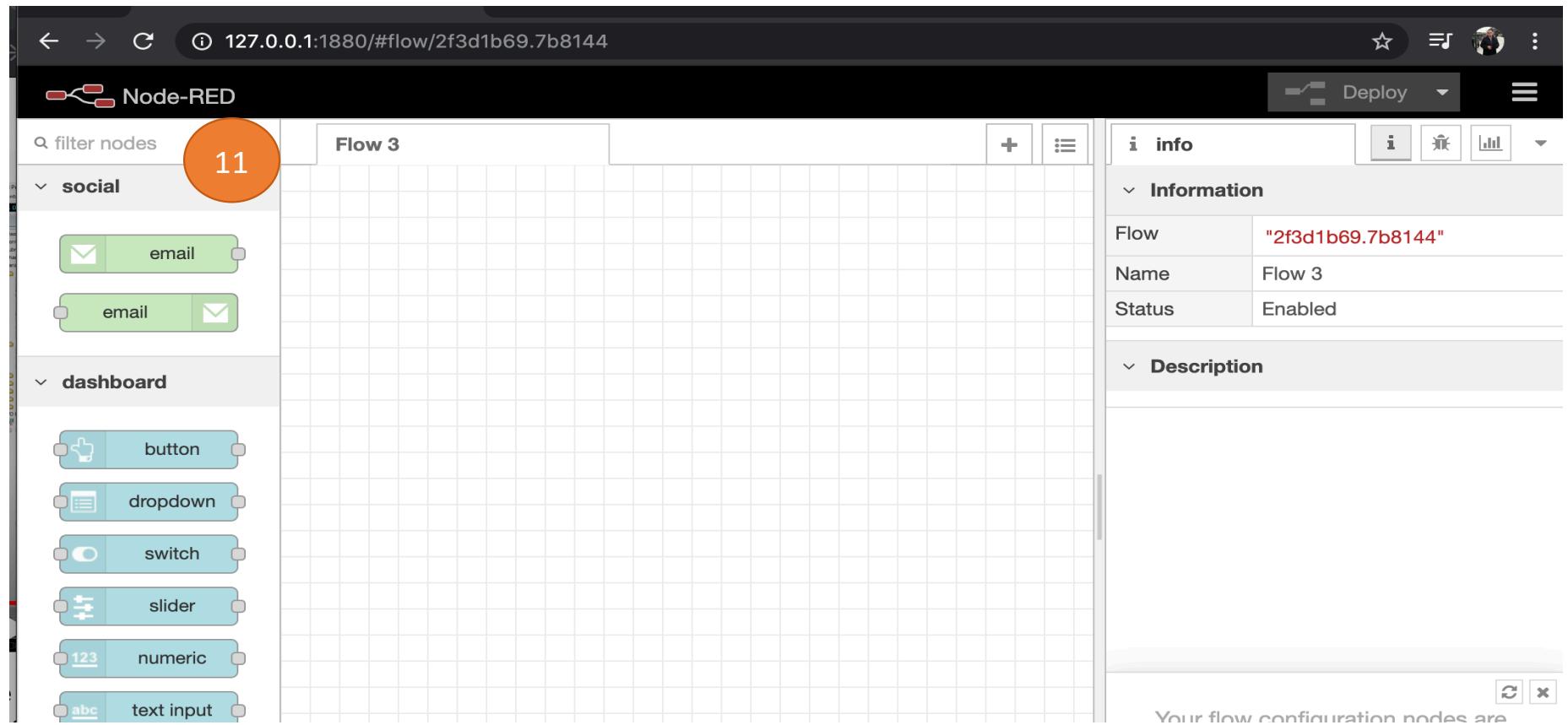
9. Successfully added email palette.



10. Click Close.



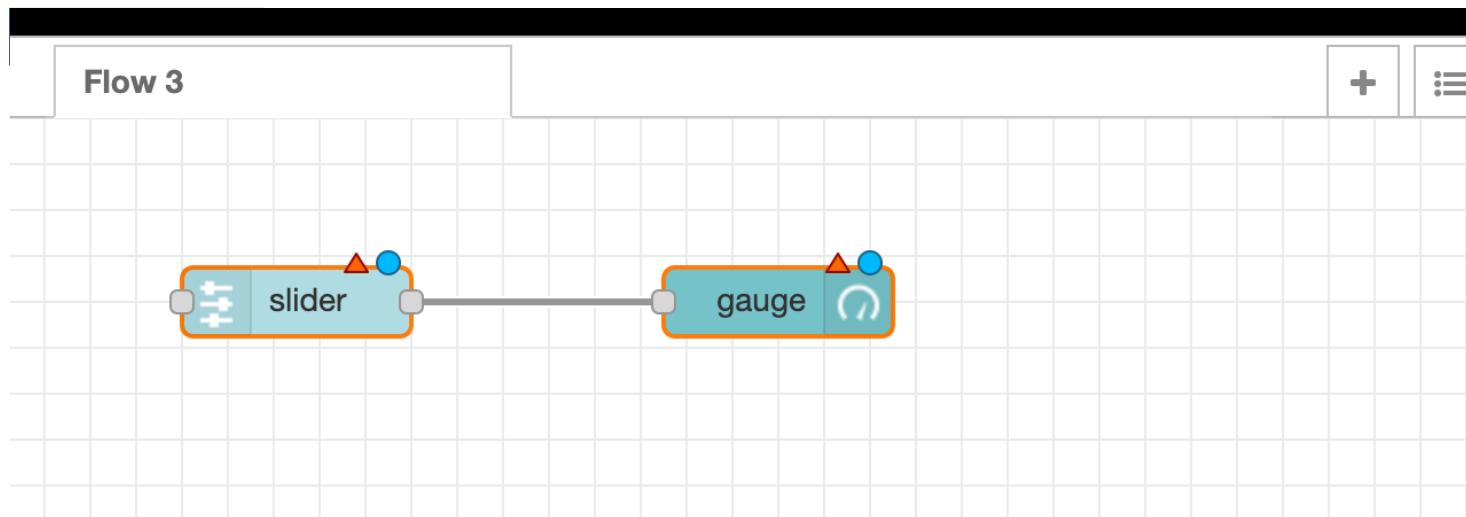
11. Newly added palettes.



EXERCISE 1: My First Dashboard

Gauge respond based on slider movement.

1. Arrange the nodes as in the figure.



EXERCISE 1: My First Dashboard

2. Double click the *slider node* and the *gauge node* in order to check its properties (one at a time).

The image shows two separate dialog boxes for editing nodes, both titled "Edit [node type] node". Each dialog has a "Properties" tab and several configuration fields.

Edit slider node Properties:

- Group: [Home] House
- Size: auto
- Label: slider
- Tooltip: optional tooltip
- Range: min 0, max 10, step 1
- Output: continuously while sliding
- If msg arrives on input, set slider to new payload value:
- When changed, send:
 - Payload: Current value
 - Topic: (empty)

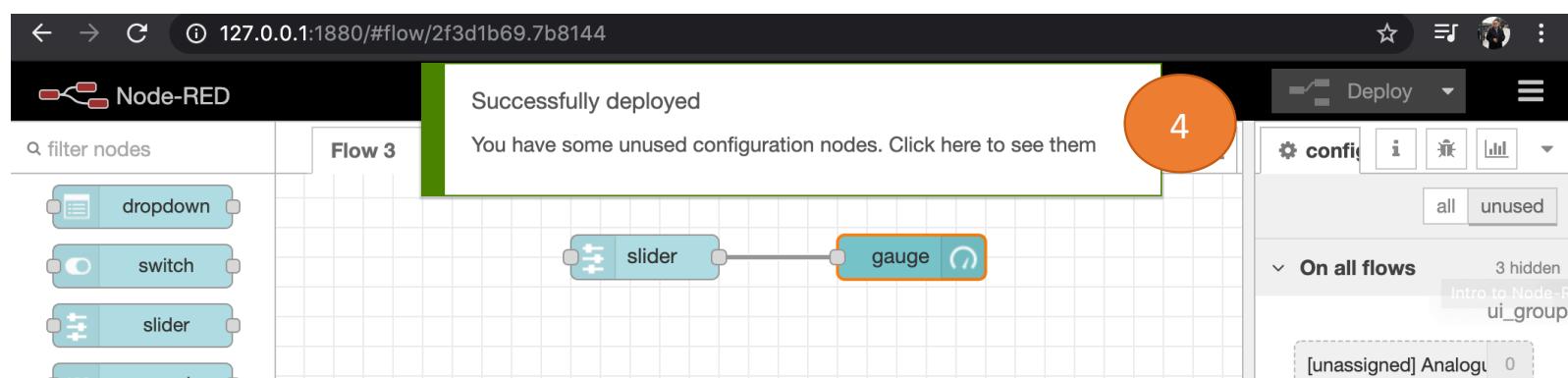
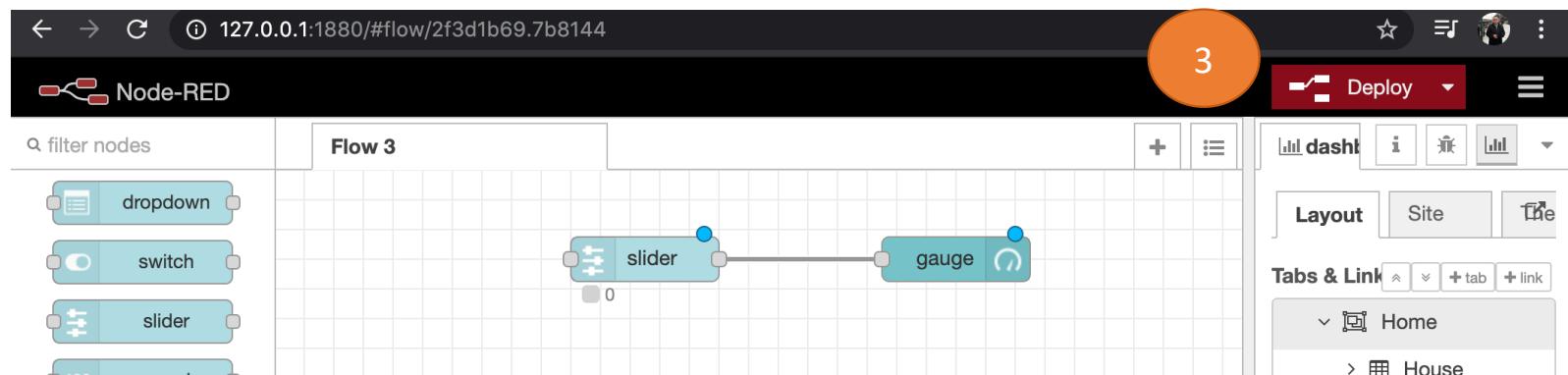
Edit gauge node Properties:

- Group: [Home] House
- Size: auto
- Type: Gauge
- Label: gauge
- Value format: {{value}}
- Units: units
- Range: min 0, max 10
- Colour gradient: A horizontal bar with three segments: green, yellow, and red.
- Sectors: 0, ..., optional, ..., optional, ..., 10

EXERCISE 1: My First Dashboard

3. Click Deploy once finished.

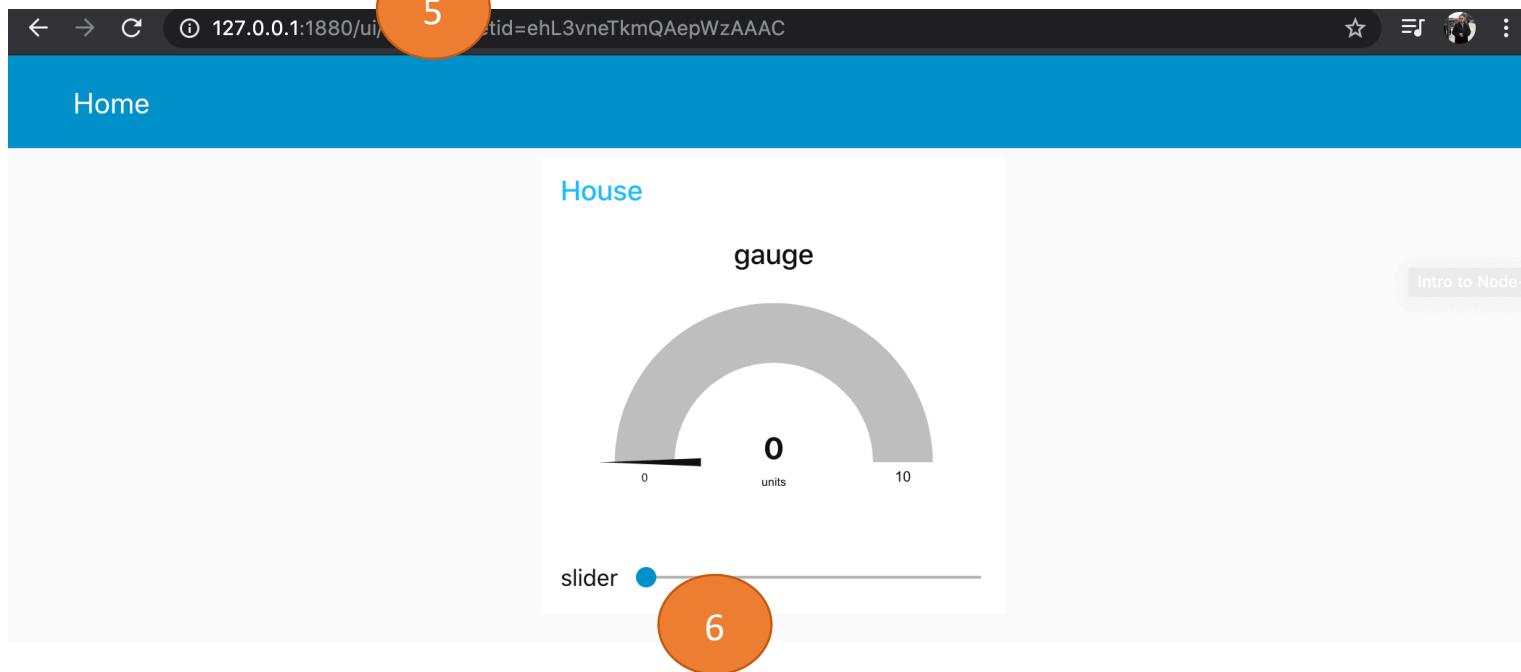
4. Successfully deployed.



ECERCISE 1: My First Dashboard

5. The UI IP Address, <http://127.0.0.1:1880/ui/> or <http://localhost/ui/>

6. Move the slider and state the answer.

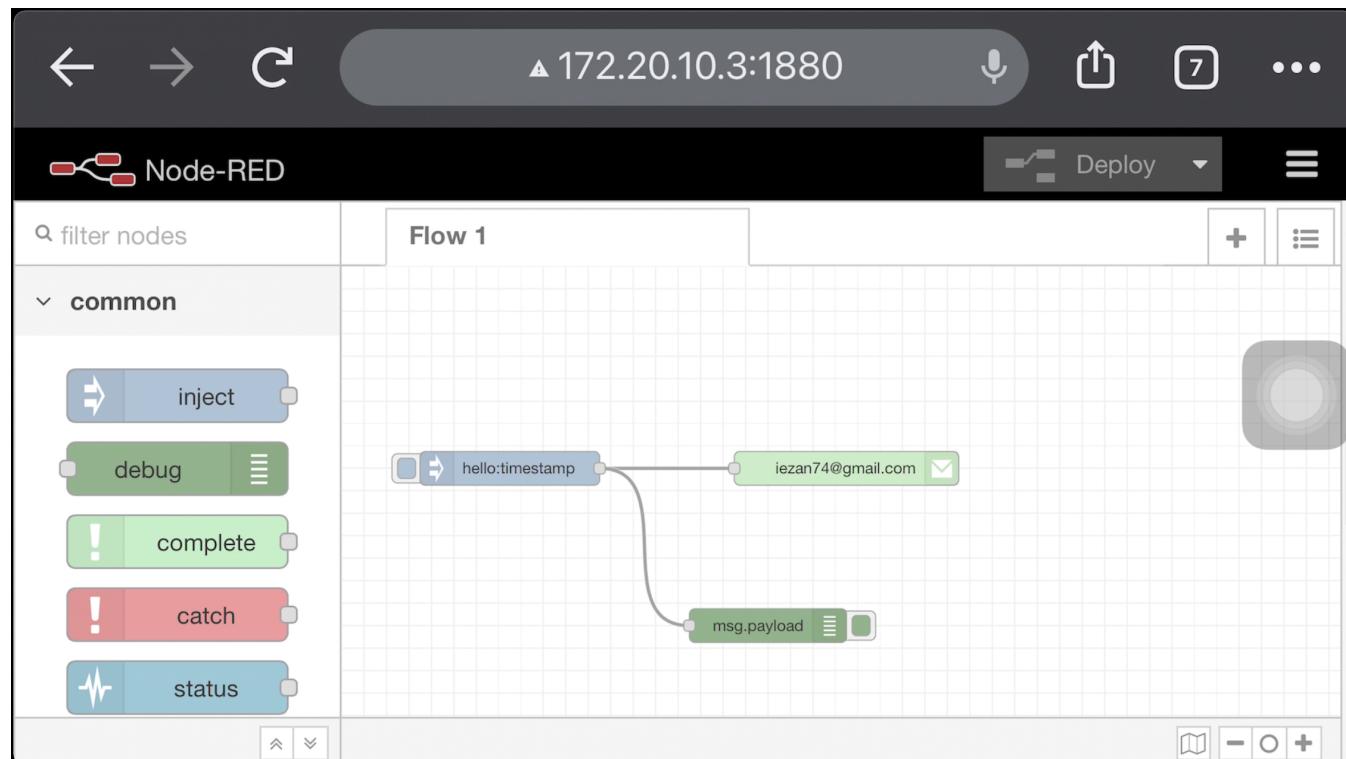


EXERCISE 1: My First Dashboard

7. Get the IP address of your nodeRED server.

8. Connect your smart device / laptops / pc same network with your nodeRED server.

9. Open a browser and type the nodeRED's IP address with the port number.



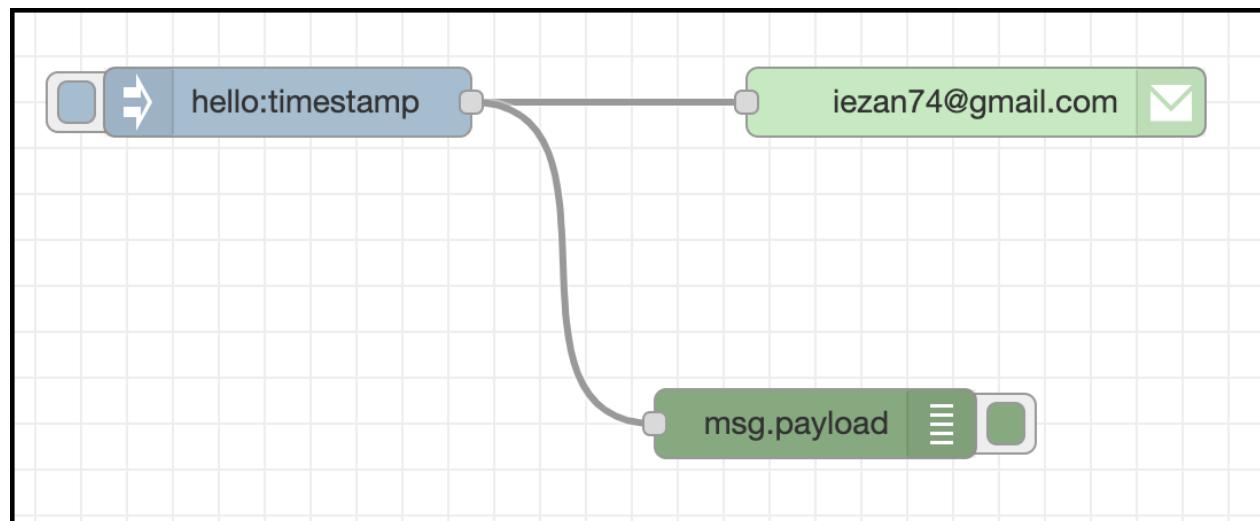
EXERCISE 2: Sending Alert to Email

Create 2 new Gmail accounts. One is use as sender/source and another one is for receiving/destination the email.

Develop a simple solution that will send an email to the with the content of you names and student id.

The email will send automatically every 30 seconds. The email sent must be shown at debug window.

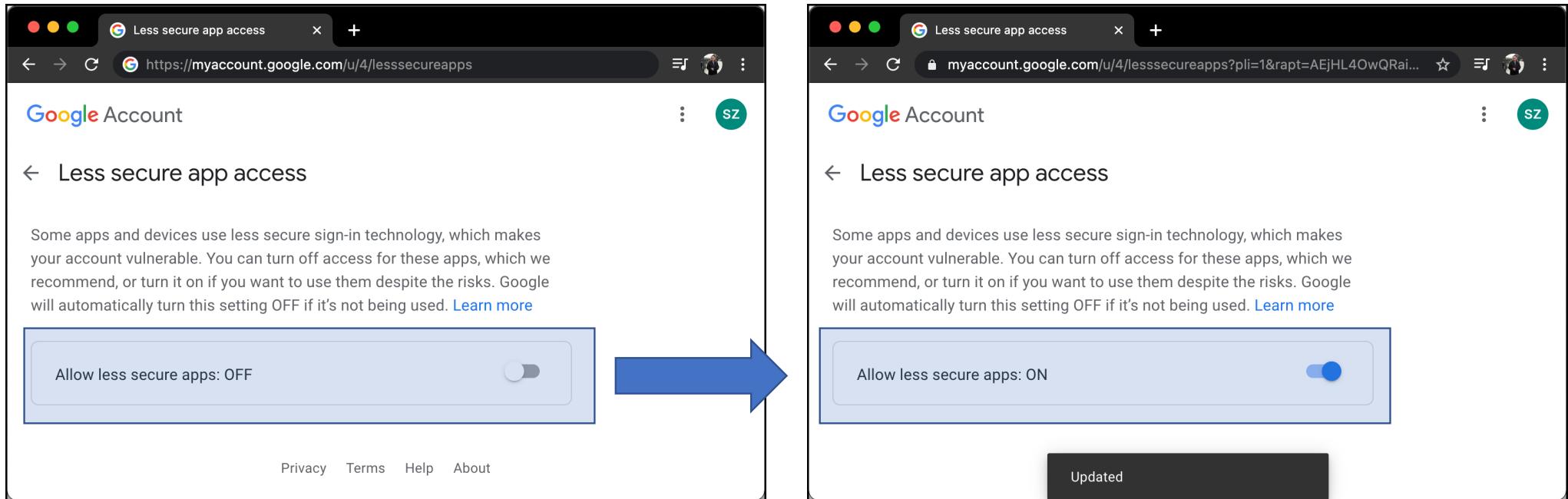
Note: Open new Flow



EXERCISE 2: Sending Alert to Email

Note: Make sure to allow less secure apps. Refer to the following link:

<https://myaccount.google.com/lesssecureapps?pli=1>



EXERCISE 2: Sending Alert to Email

>> Manage GOOGLE Account >> Security >> Less secure app access

The screenshot shows a web browser window for a Google Account. The URL in the address bar is myaccount.google.com/u/4/security. The left sidebar has a navigation menu with the following items: Home, Personal info, Data & personalisation, **Security** (which is highlighted with a blue background), People and sharing, Payments and subscriptions, and About. The main content area is titled "Less secure app access". It contains a warning message: "Your account is vulnerable because you allow apps and devices that use less secure sign-in technology to access your account. To keep your account secure, Google will automatically turn this setting OFF if it's not being used." Below this message is a status indicator: "On" with a yellow exclamation mark icon. A blue link "Turn off access (recommended)" is present. At the bottom of the main content area is a section titled "Signing in to other sites". A small red circular icon is at the bottom left of the main content area. At the very bottom of the page, there is a footer note: "You're not using your Google Account to".

EXERCISE 2: Sending Alert to Email

Add the following nodes:

>> Inject
>> Debug
>> Send Email

Connect as in Figure 2i.

Double click inject node to edit. Refer the settings at Figure 2ii.

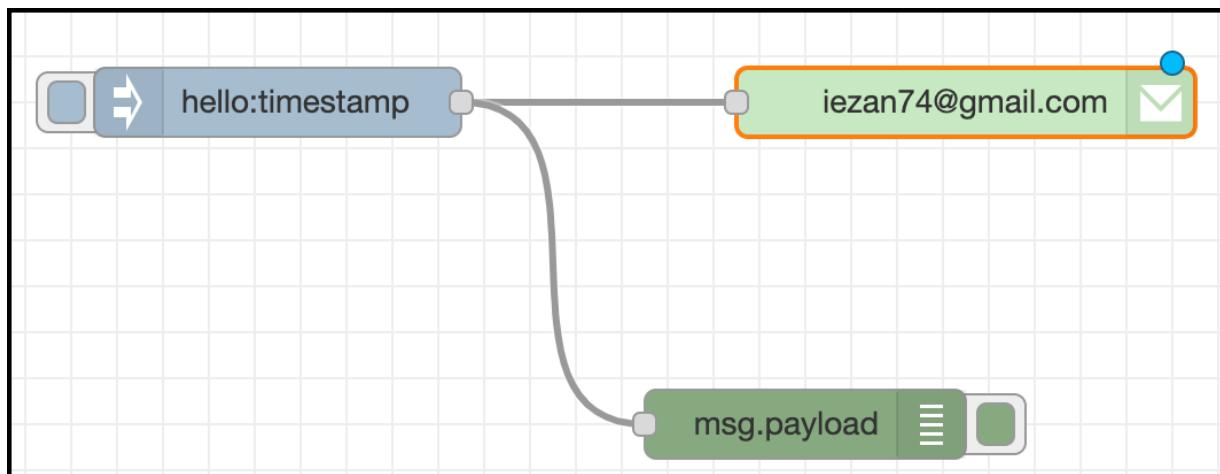


Figure 2i

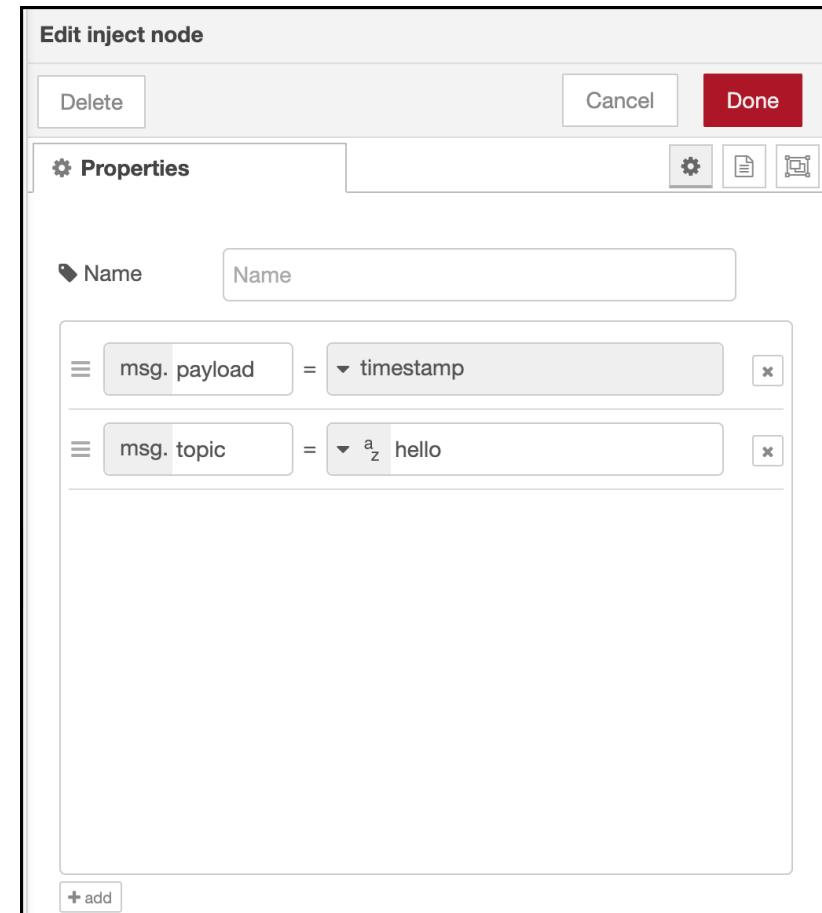


Figure 2ii

EXERCISE 2: Sending Alert to Email

Double click email node to edit. Refer the settings at Figure 2iii & click Done.

Click Deploy to update & save the project.

Click at left part of the inject node to trigger the system.

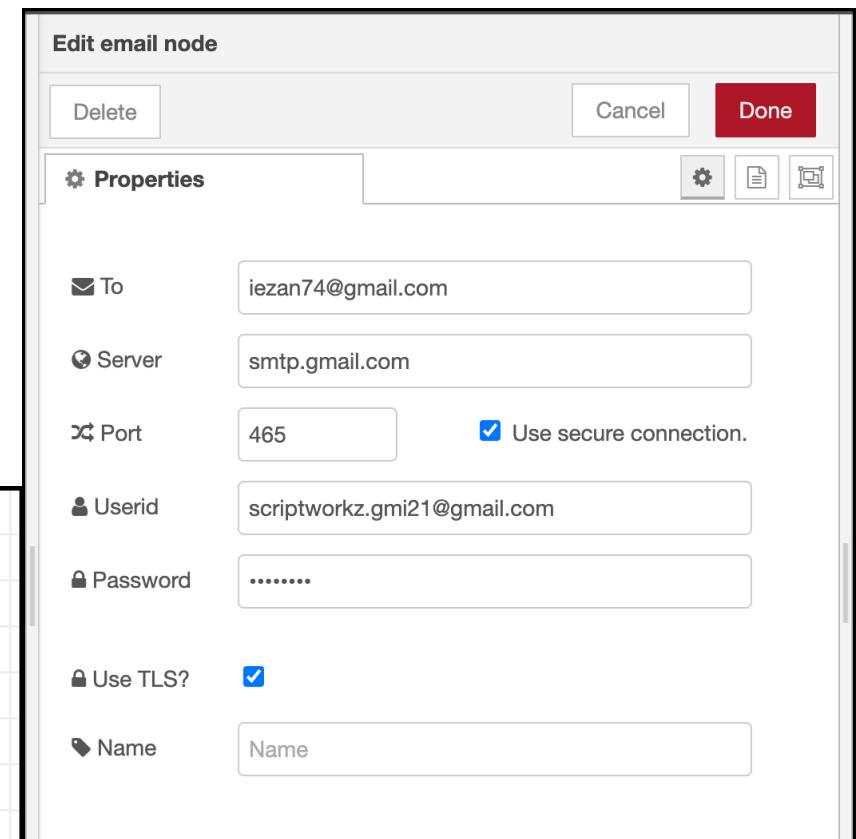
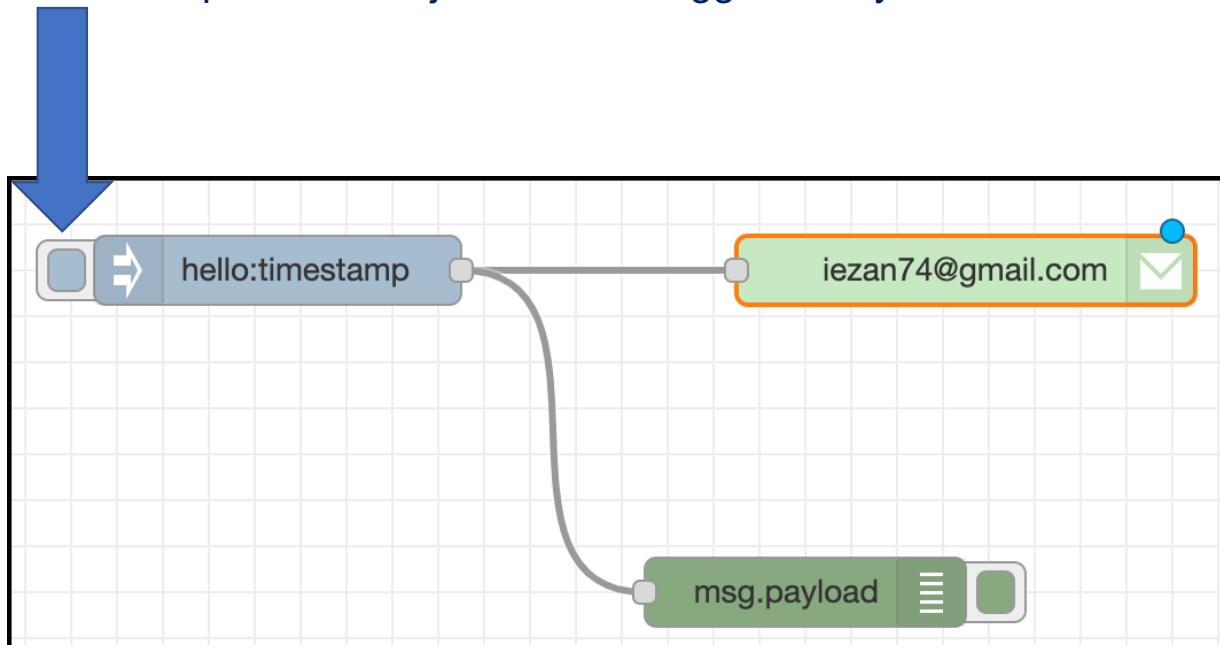


Figure 2iii

END