

PV's and Google Home

Propogating PV's with Free Web Tools to a Smart Home Device

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Canadian Light Source



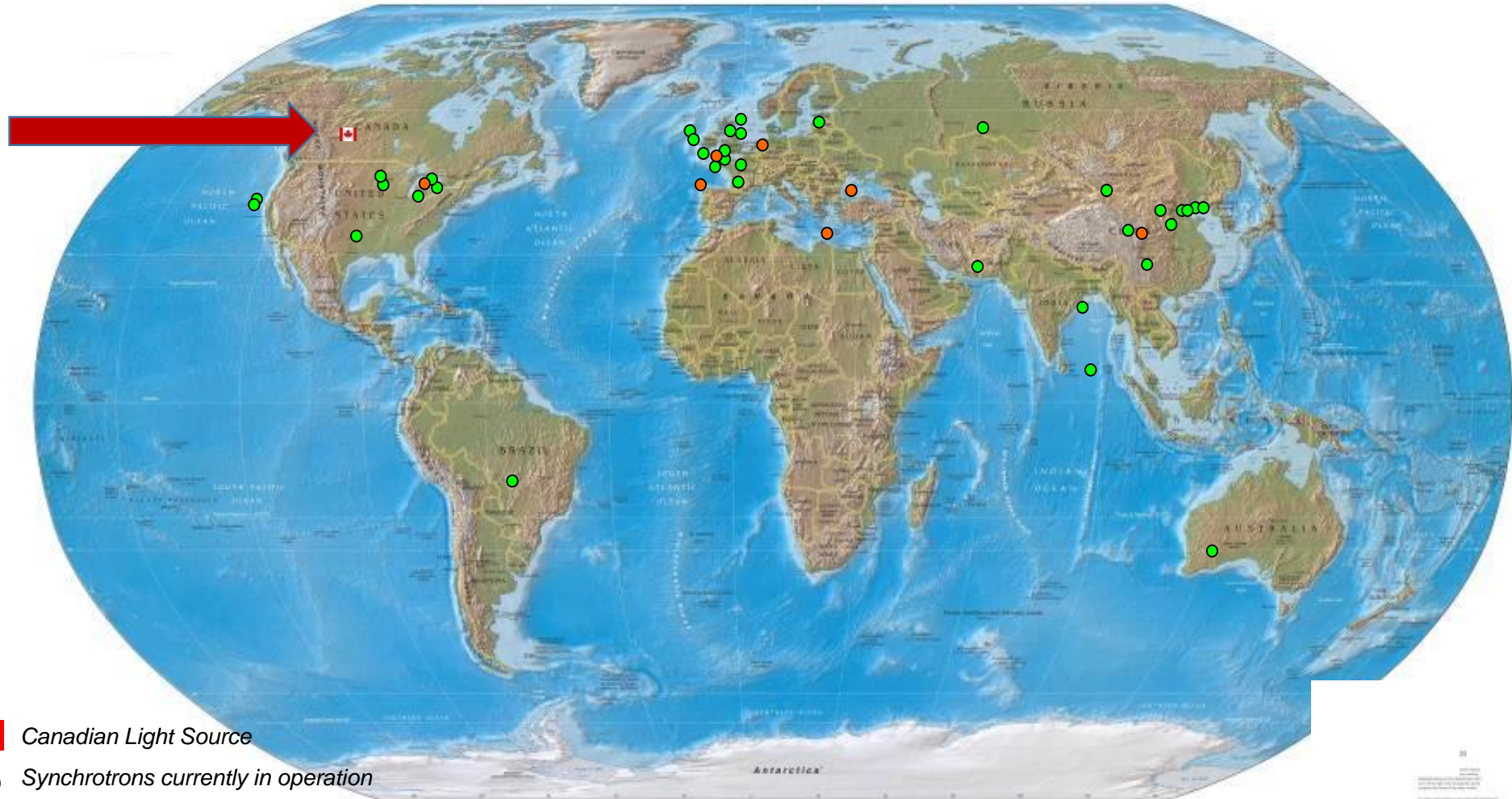
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Synchrotrons Around the World

13



-  *Canadian Light Source*
-  *Synchrotrons currently in operation*
-  *Synchrotrons under construction or in planning phase*



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Google Home



Problem #1: Get the Information Out of the Building

< WEB >

CONTROL

SYSTEM

< /WEB >

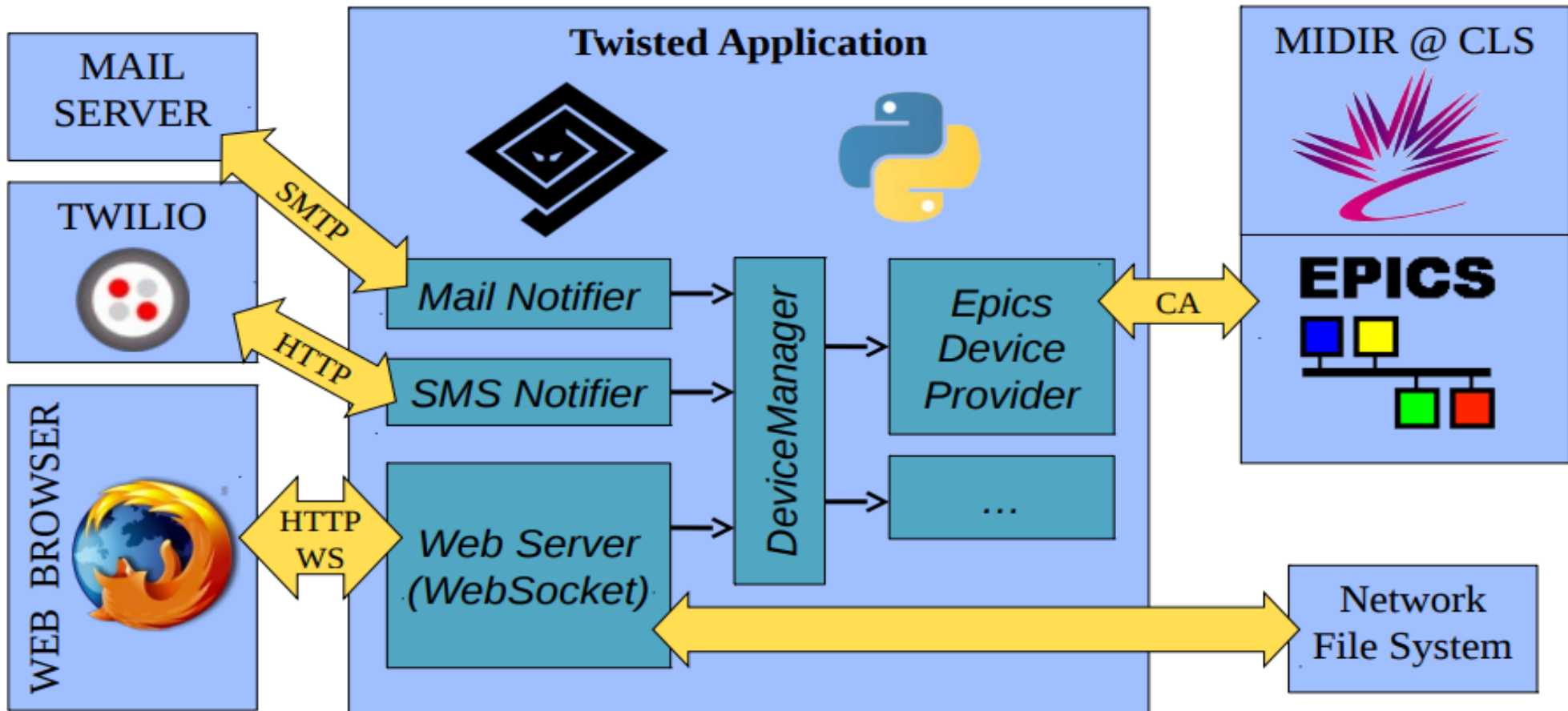


Control System Web

Send notifications based on Process Variables



Control System Web Architecture

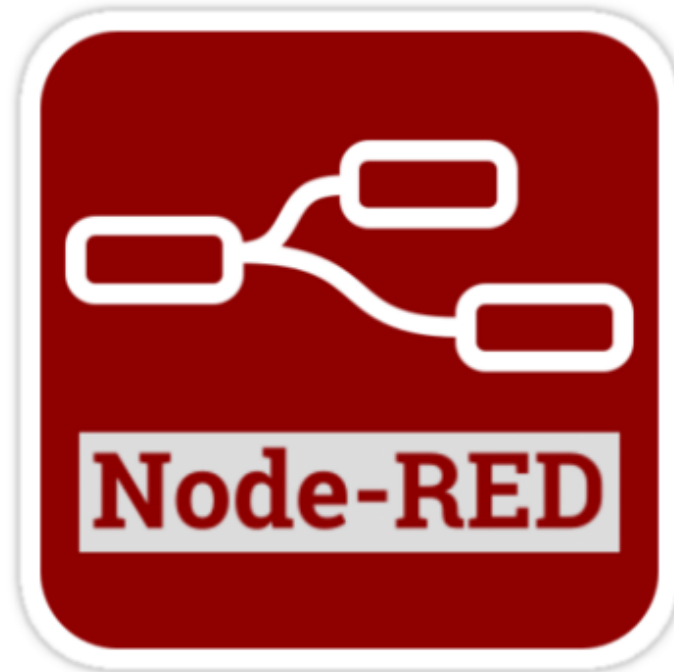


Config File for Control System Web

```
.  
.   
.   
EMAIL_BRANT:brant.billinghurst@lightsource.ca  
.   
.   
.   
#-----  
# Far IR  
#-----  
[ epics:PCT1402-01:mA:fbk?threshold=100&name=PCT1402-01:mA:fbk&units=Beam+Change ]  
mail: $(EMAIL_BRANT)s  
~  
~  
~
```



Problem #2: Get Google Home to Speak the Contents of the Email



Q filter nodes

Flow 1

Flow 2

+

info

debug

- ! status
- link
- mqtt
- http
- websocket
- tcp
- udp

v output

- debug
- link
- mqtt
- http response
- websocket
- tcp
- udp
- googlehome notify

v function

- f function
- { template



v Information

Node	"3f0ae042.290dd"
Type	e-mail in
protocol	"IMAP"
server	"imap.gmail.com"
useSSL	true
port	"993"
box	"INBOX"
disposition	"None"
repeat	"300"

show less ▲

v Node Help

Repeatedly gets a **single email** from an IMAP server and forwards on as a msg if not already seen.

The subject is loaded into `msg.topic` and `msg.payload` is the plain text body. If there is text/html then that is returned in `msg.html`. `msg.from` and `msg.date` are also set if you need them.

Additionally `msg.header` contains the complete header object including `to`, `cc` and other potentially useful properties.

Uses the `imap` module.




Show the Info tab with `ctrl-g i` or `ce.ca`
the Debug tab with `ctrl-g d`

+

info | debug

Information

Node	"5e2f28a2.f75bf8"
Type	googlehome-notify
server	 192.168.1.193

show less ▲

Node Help

None

Google Home Notify



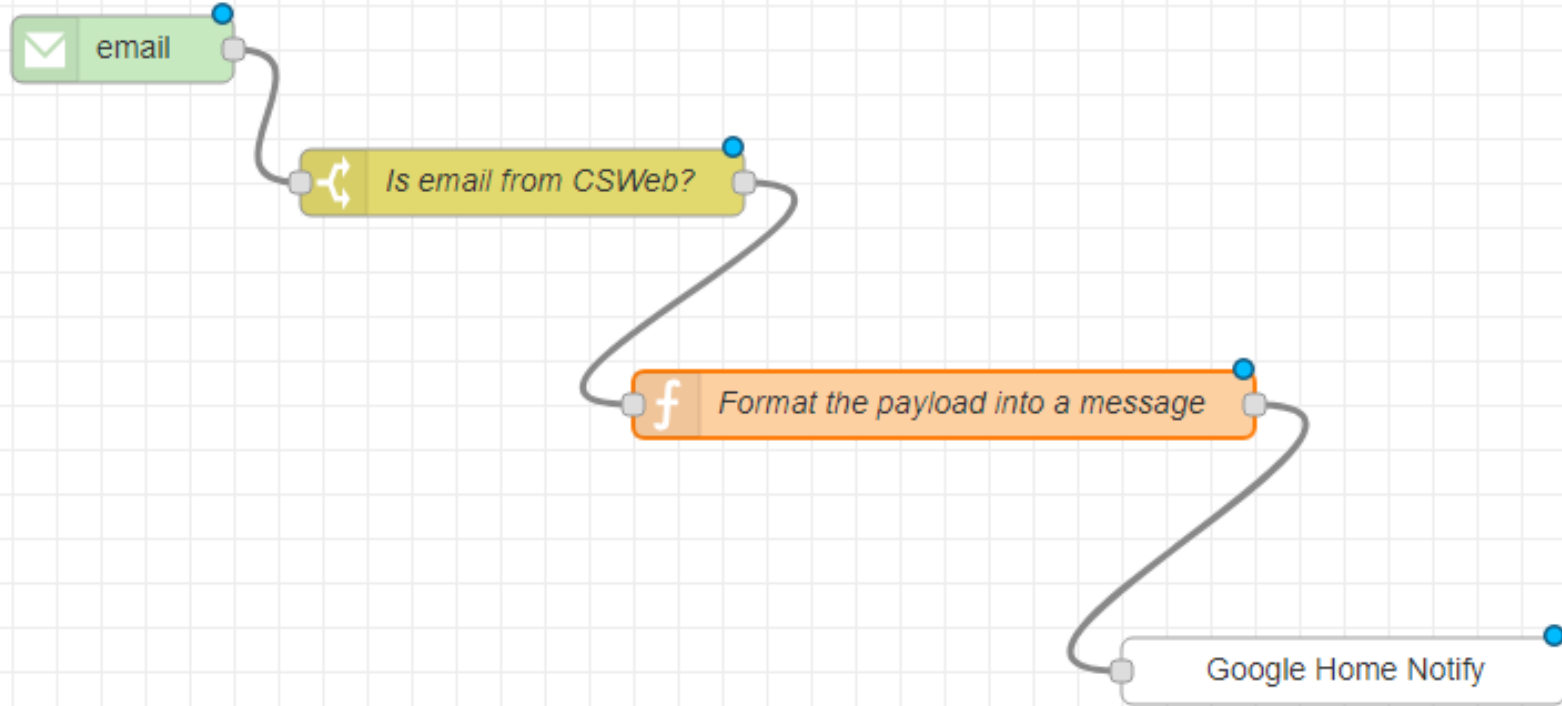
Flow 1

Flow 2

+

info

debug



Information

Node	"f984c57d.dc95d8"
Name	Format the payload into a message
Type	function
func	<pre>return "You have a notification that " + msg.payload;</pre>
outputs	1
noerr	0

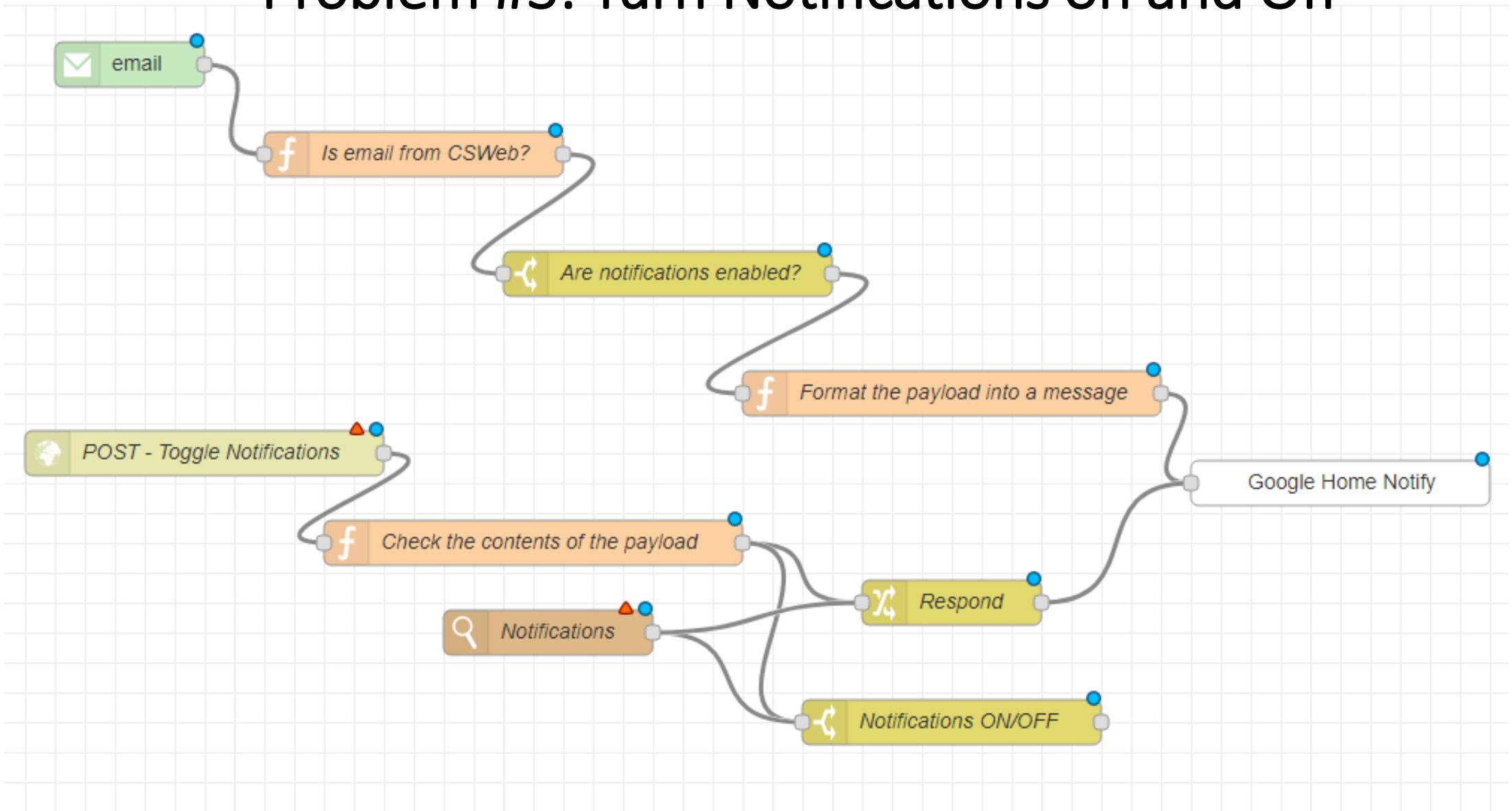
show less

Node Help

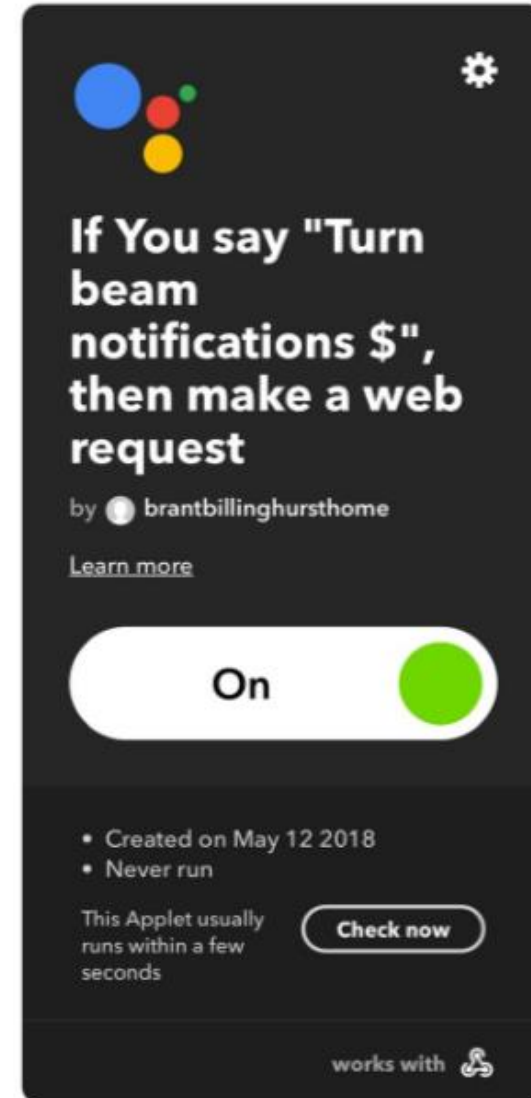
A JavaScript function block to run against the messages being received by the node.

The messages are passed in as a JavaScript object called `msg`.

Problem #3: Turn Notifications on and Off



Problem #4: Pass the POST Request to Node-RED



Configure



If You say "Turn beam notifications \$", then make a web request

63/140

[View activity log](#)

Receive notifications when this Applet runs



Say a phrase with a text ingredient

This trigger fires when you say "Ok Google" to the Google Assistant followed by a phrase like "Post a tweet saying 'New high score.'" **Use the \$ symbol to specify where you'll say the text ingredient

What do you want to say?

Turn beam notications \$

Enter a \$ where you'll say the text ingredient

What's another way to say it? (optional)



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Make a web request

This action will make a web request to a publicly accessible URL. NOTE: Requests may be rate limited.

URL

http://70.64.56.45/googlehome/

Surround any text with "<<>>" to escape the content

Add ingredient

Method

POST



The method of the request e.g. GET, POST, DELETE

Content Type (optional)

application/json



Optional

Body (optional)

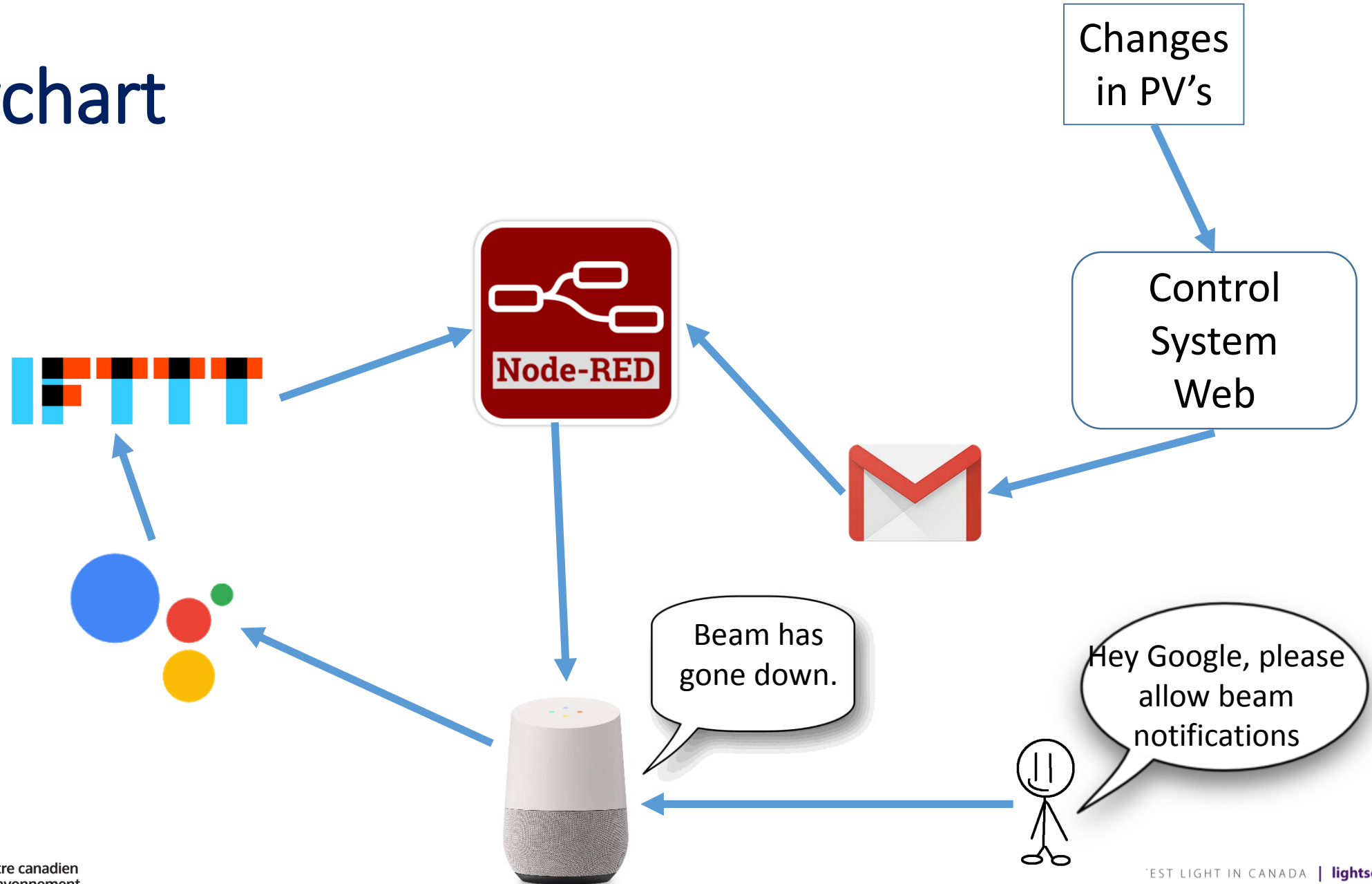
```
{ "ghomenotification":  
  TextField }
```

Surround any text with "<<>>" to escape the content

Add ingredient

Save

Flowchart



Thank you!



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