

#	Request
1	Could you review the design note and add comments? <a href="https://github.com/node-red/designs/pull/12">https://github.com/node-red/designs/pull/12</a>

- **Use case 1: Incoming message control**  
Because Node-RED accepts all incoming message from input nodes like mqtt-in node, Node.js process sometimes reaches the upper limit of memory usage. To avoid the risk of message queue overflow, rate limit functionality in delay node will be useful but Node-RED users cannot customize queue handling. For example, the current delay node cannot simultaneously use the drop option and queue to process burst incoming messages.
- **Use case 2: Logging and error handling**  
Because current drop option in rate limit mode doesn't record dropped messages, Node-RED users aren't aware of the lost messages. Therefore, it will be useful for Node-RED users to track background behaviors if the delay node outputs the number of dropped messages to the log stream. Additionally, Node-RED users can add their error handling in their flow if the delay node throws the dropped messages to the catch node when the queue reaches the defined limit.
- **Use case 3: Changing properties on demand**  
Currently, the delay node supports msg.delay to change property value on demand. If the delay node additionally supports msg.rate to set rate value and msg.queueLength to change queue size, users can create custom delay node using subflow to wrap delay node.

# Options in settings.js which the delay node uses

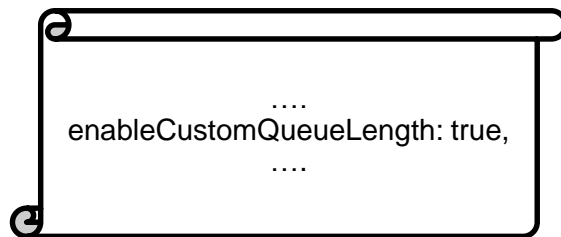
#	Concerns
1	Custom queue length should be merged to nodeMessageBufferMaxLegth because the values are the same meaning?
2	Node property UI needs throwDroppedMessages option to turn on/off in each delay node?

- **nodeMessageBufferMaxLength** [Existing option]

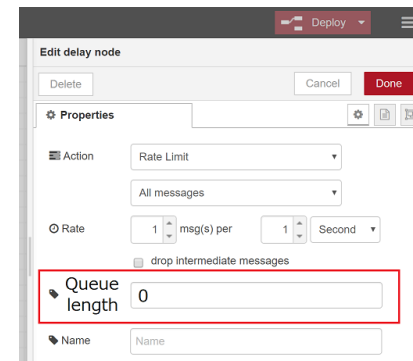
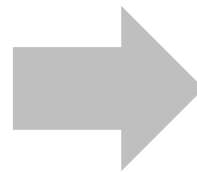
The enhanced delay node supports nodeMessageBufferMaxLength as the default buffer length. The buffer length needs to be greater than queue length defined in msg.queueLength or node property UI.

- **enableCustomQueueLength** (default: false) [Newly added]

When the enableCustomQueueLength value is true, the node property UI of the enhanced delay node shows enableCustomQueueLength as the text input. The default value is 0 because the current implementation doesn't use the queue.



Settings.js



- **throwDroppedMessages** (default: false) [Newly added]

If the throwDroppedMessages in setting.js is true, the enhanced delay node will throw dropped messages to the catch node. After the Node-RED supports this handling, Node-RED users are able to write their error handling in the flow. If the throwDroppedMessages in setting.js is false, the behavior of enhanced delay node will be the same as existing other nodes (Other nodes which support nodeMessageBufferMaxLength setting throws an empty message to the catch node when they reach the limit of the buffer length).

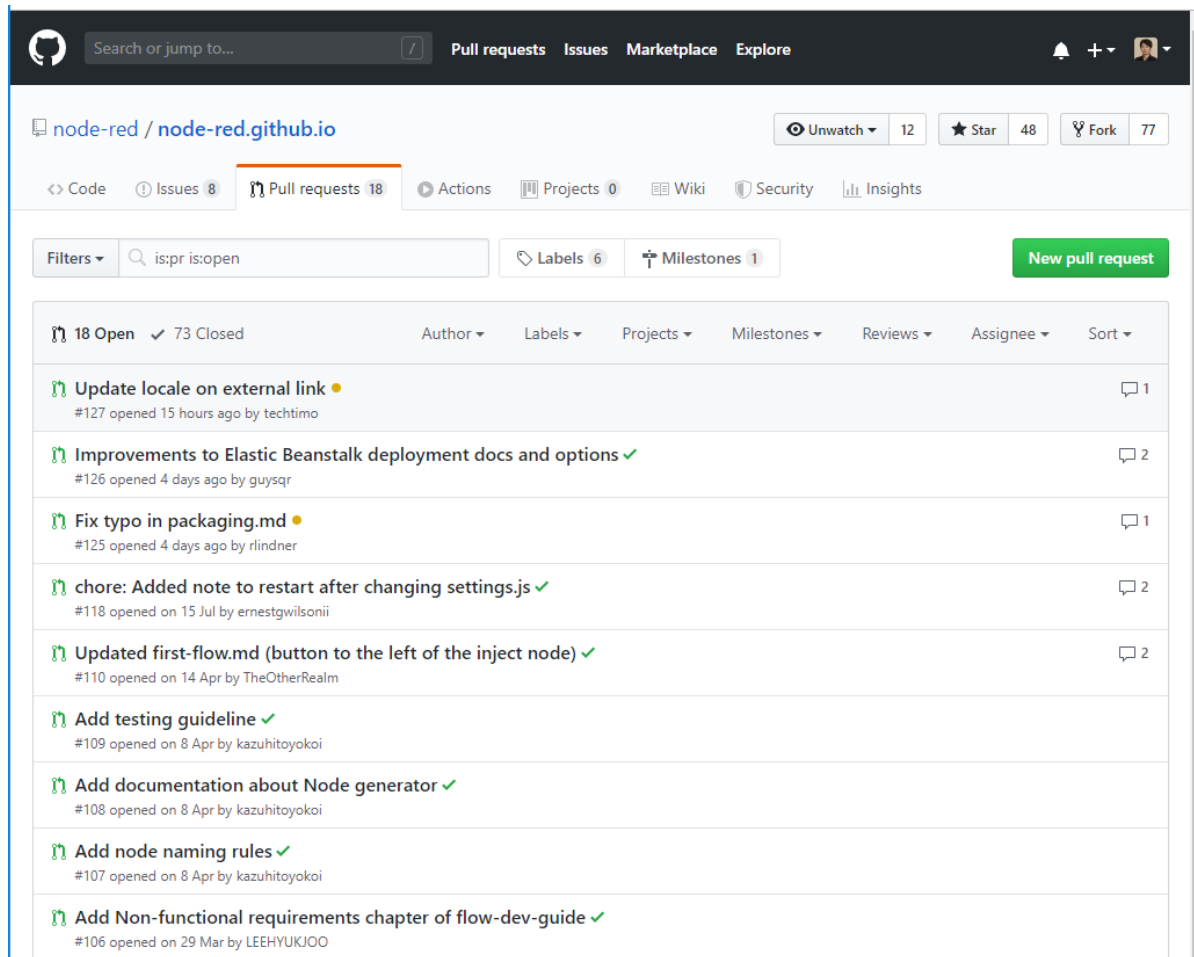
- The number of dropped messages
  - debug level: Node-RED outputs the node ID and the number of dropped messages to the log stream every 15 seconds.
  - trace level: In addition to debug level information, Node-RED writes message ID of dropped messages to the log stream.
- Queue usage rate
  - debug level: Node-RED outputs the node ID and the size of the message queue every 15 seconds.

- **msg.rate:** property in message to change rate value [Discussed]  
The enhanced delay node overwrites the existing rate value defined in the node property UI when it receives the message which contains msg.rate value. To be aware of changing the value when tracing, the messages about changed rate value should be outputted to log stream after changing the rate using msg.rate.
- **msg.queueLength:** property in message to change queue length [Newly added]  
The enhanced delay node overwrites queue length according to msg.queueLength value which received message has. If the number of messages in the queue is greater than the queue length in the msg.queueLength, the last messages will be deleted. To be aware of changing the value when tracing, the messages about changed rate value should be outputted to log stream after changing the queue length using msg.queueLength.

The enhanced delay node newly has queueLength as a node property. The values in the following table are default values.

#	Action			pause Type	Properties to set node property UI									
					timeout	timeout Units	rate	nbRate Units	rate Units	random First	random Last	random Units	drop	queueLength
1	Delay each Message	Fixed delay	-	delay	5	seconds								
2		Random delay	-	random						1	5	seconds		
3		Override delay with msg.delay	-	delayv	5	seconds								
4	Rate limit	All messages	-	rate			1	1	second				false	0
5		For each msg.topic	Send each topic in turn	queue			1	1	second					
6			Send all topics	timed			1	1	second					

#	Request
1	Could you review the guidelines after releasing Node-RED v1.0? <a href="https://github.com/node-red/node-red.github.io/pulls">https://github.com/node-red/node-red.github.io/pulls</a>



The screenshot shows the GitHub interface for the repository `node-red / node-red.github.io`. The page displays a list of 18 open pull requests. The first pull request, #127, is titled "Update locale on external link" and was opened 15 hours ago by `techtimo`. Other pull requests include improvements to Elastic Beanstalk deployment docs, a typo fix in `packaging.md`, and several documentation updates. The interface includes navigation tabs for Code, Issues, Pull requests, Actions, Projects, Wiki, Security, and Insights. A search bar and filters are also visible.

PR #	Title	Status	Author	Opened
#127	Update locale on external link	Open	techtimo	15 hours ago
#126	Improvements to Elastic Beanstalk deployment docs and options	Open	guysqr	4 days ago
#125	Fix typo in packaging.md	Open	rlindner	4 days ago
#118	chore: Added note to restart after changing settings.js	Open	ernestgwilsonii	15 Jul
#110	Updated first-flow.md (button to the left of the inject node)	Open	TheOtherRealm	14 Apr
#109	Add testing guideline	Open	kazuhitoyokoi	8 Apr
#108	Add documentation about Node generator	Open	kazuhitoyokoi	8 Apr
#107	Add node naming rules	Open	kazuhitoyokoi	8 Apr
#106	Add Non-functional requirements chapter of flow-dev-guide	Open	LEEYUKJOO	29 Mar