


IoT Domain Analyst

Lab Record — Lab 4

- 1 March 2021

Programme	:	B.Tech(CSE)	Semester	:	Winter 2020–21
Course Title	:	IoT Domain Analyst – Lab	Code	:	ECE3502
			Slot	:	L5+L6
Name	:	Aadhitya Swarnesh	Registration. No	:	
Faculty (s)	:		Expt. No	:	4

Experiment 1 :

Retrieve the RSS feed of any popular News outlet and display it in an interactive format in realtime, using Node-Red and concepts of IoT.

Aim :

To Retrieve and display the latest News using the outlet's RSS feed and parsing through it and displaying the News in an interactive format.

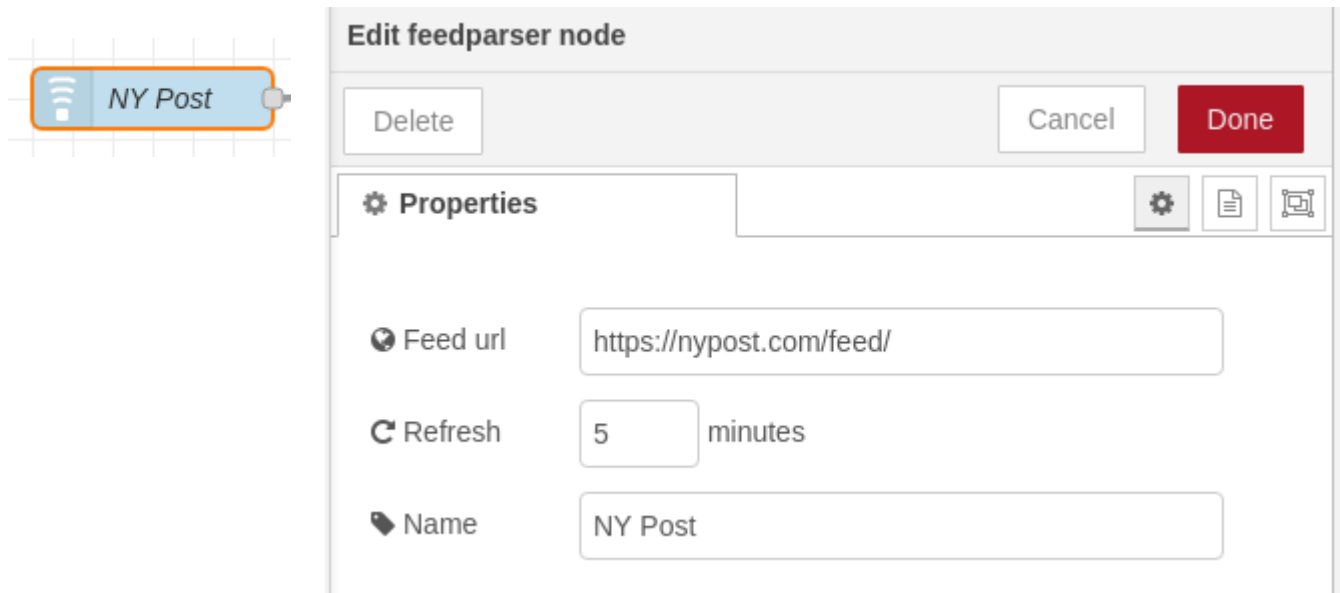
Description :

- ❖ We use the feed parser node of the node red, to retrieve the news from the RSS feed link that we give it, and parse through the retrieved XML document and give out the resultant News headline and the content.
- ❖ We use an Audio Out Node which is a part of the Node red Dashboard to use the Text to Speech feature and speak out the news.
- ❖ We use a Text Output node to display the news in the UI Dashboard of the Node Red.
- ❖ We use the Debug node to display the News content parsed in the debug window.

Flow Diagrams :

Stage 1 : Feed Parser Node

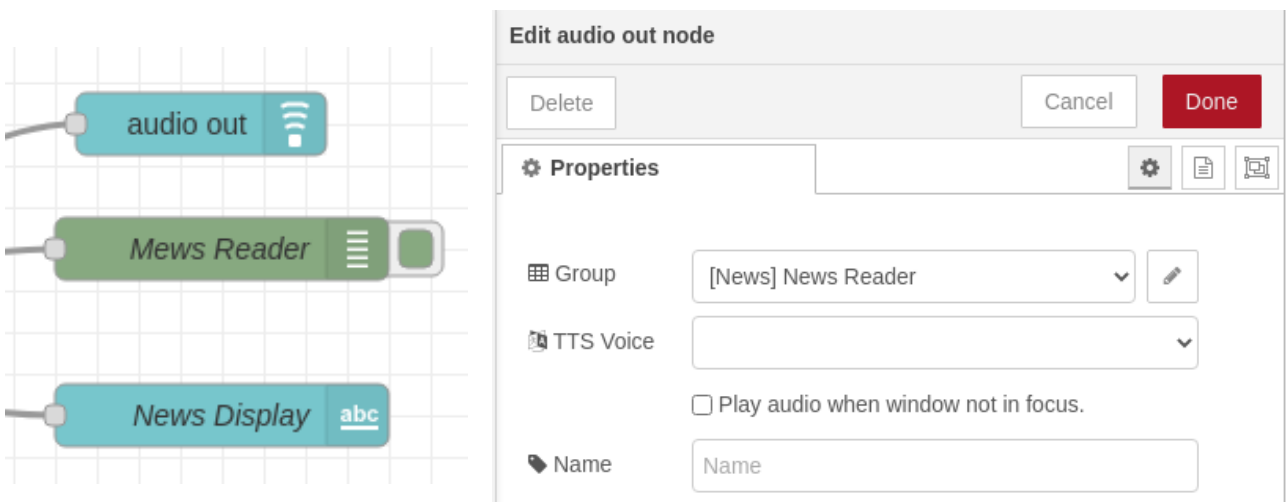
This node takes in the link to a realtime RSS feed provider, and also a refresh time which it will use to refresh the RSS feed link every time interval provided. This is how the latest news will always be fetched and displayed in our node-red flow.



Stage 2 : Output Nodes

For this flow, we have 3 nodes which will provide the output of the feed parser node which is essentially the latest news in three different places and formats.

The Debug node displays the latest news in the debug window, while the audio out node gives out the news in an audio format, and the text node displays the news in the UI Dashboard of the Node-Red.



Edit debug node
Delete
Cancel
Done

Properties

Output
complete msg object

To
☒ debug window
☐ system console
☐ node status (32 characters)

Name
Mews Reader

Edit text node
Delete
Cancel
Done

Properties

Group
[News] News Reader

Size
auto

Label
text

Value format
{{msg.payload}}

Layout

label value

label value

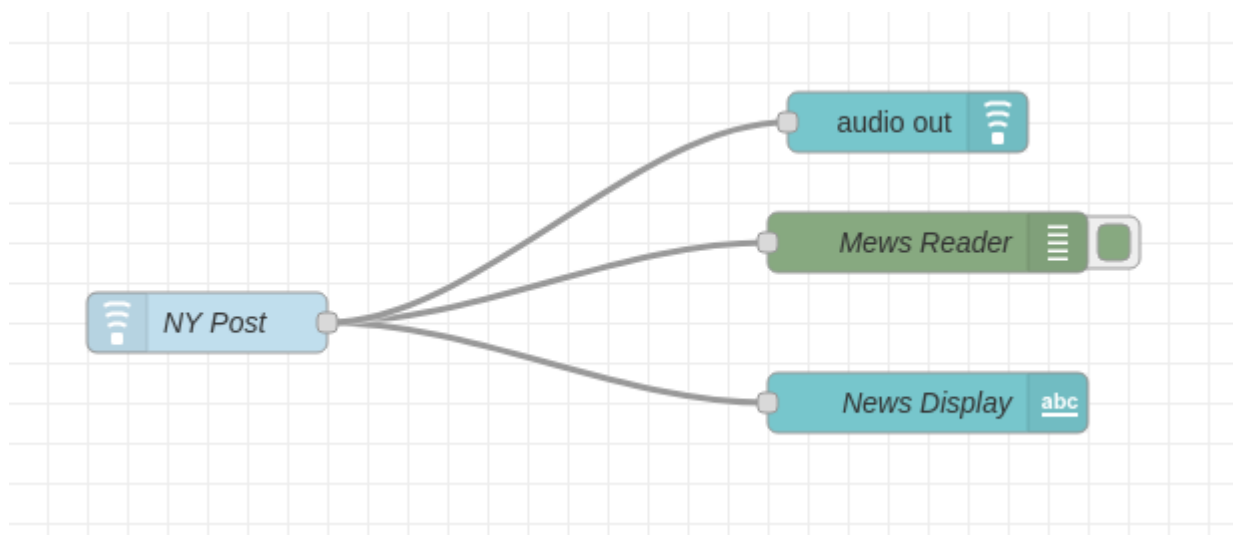
label value

label value

label value

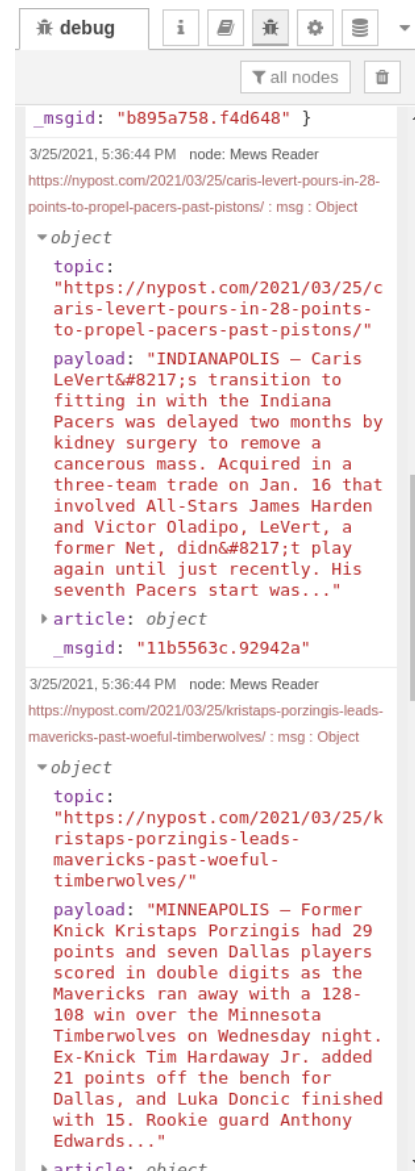
Name
News Display

Stage 3 : Complete Output Flow



Result :

The output is shown in the debug window in the following format :



```
debug
i
all nodes
_msgid: "b895a758.f4d648" }
3/25/2021, 5:36:44 PM node: Mews Reader
https://nypost.com/2021/03/25/caris-levert-pours-in-28-points-to-propel-pacers-past-pistons/ : msg : Object
▼ object
  topic:
    "https://nypost.com/2021/03/25/caris-levert-pours-in-28-points-to-propel-pacers-past-pistons/"
  payload: "INDIANAPOLIS – Caris LeVert's transition to fitting in with the Indiana Pacers was delayed two months by kidney surgery to remove a cancerous mass. Acquired in a three-team trade on Jan. 16 that involved All-Stars James Harden and Victor Oladipo, LeVert, a former Net, didn't play again until just recently. His seventh Pacers start was..."
  ▶ article: object
    _msgid: "11b5563c.92942a"
3/25/2021, 5:36:44 PM node: Mews Reader
https://nypost.com/2021/03/25/kristaps-porzingis-leads-mavericks-past-woeful-timberwolves/ : msg : Object
▼ object
  topic:
    "https://nypost.com/2021/03/25/kristaps-porzingis-leads-mavericks-past-woeful-timberwolves/"
  payload: "MINNEAPOLIS – Former Knick Kristaps Porzingis had 29 points and seven Dallas players scored in double digits as the Mavericks ran away with a 128-108 win over the Minnesota Timberwolves on Wednesday night. Ex-Knick Tim Hardaway Jr. added 21 points off the bench for Dallas, and Luka Doncic finished with 15. Rookie guard Anthony Edwards..."
  ▶ article: object
```

The News as displayed in the UI Dashboard looks as below :

News

News Reader

News

As the pandemic continues to beset the nation, and new variants of the COVID-19 virus continue to rise in Europe and the US, the use of personal protective equipment (PPE) such as N95 and KN95 masks has become essential in preventing the spread of coronavirus. N95 Medical Supplies, a U.S.-based company, offers a wide range...

In addition to this the audio out node speaks out the news in audio format.