WEB APPLICATION USING NODE-RED SERVICE

Project Name: IOT BASED SAFETY GADGET FOR CHILD SAFETY MONITORING AND NOTIFICATION

Batch Number: B5-51ME

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Web application using node red services

Node-RED is a programming tool for wiring together hardware devices, APIs and online services in new and interesting ways.

Browser-based flow editing

Node-RED provides a browser-based flow editor that makes it easy to wire together flows using the wide range of nodes in the palette. Flows can be then deployed to the runtime in a single-click.

JavaScript functions can be created within the editor using a rich text editor. A built-in library allows you to save useful functions, templates or flows for re-use.

Create your first Node-Red flow

Programs in Node-Red are called flows and they can be very simple or very complex. We will keep our first flows very simple but you will see you can do quite a bit with a simple flow. Flows are made up of connected nodes

Although each node is a single element in a flow there may be several actions which that flow generates. This implementation of nodes and flows illustrate several examples of Cybersecurity First Principles:

- **Simplicity: A flow simplifies all the activity which is being conducted in the background. By studying a flow you can quickly get an idea of what actions are being executed. This aids security as you can quickly understand the overall actions taking place vice getting lost in all the details.**

- **Abstraction: Each node presents a single action, however, there may be several steps occurring in the background. The details are abstracted behind the node which represents the interior actions.**

- **Modularization: Each node is a building block in a flow. Nodes can be swapped out to change the functionality of a flow without requiring changing the entire flow.**

- **Resource Encapsulation: You are unable to directly access several of the interior functions which are necessary for a flow to work. Due to this internalization, or encapsulation, critical functions are protected from external misuse.**

With those principles in mind, lets start your first flow.

•Open a new tab in Firefox (keep the IFTTT tab open for now) and enter the address http://127.0.0.1:1880, this will bring up the web page for the Node-Red server running on *your* Raspberry Pi. 127.0.0.1 is always the local address of the computer you are using.

- Drag a **inject** node from the left pane, called the palette, into the flow, once you drag it into the field it's title will change to **timestamp**