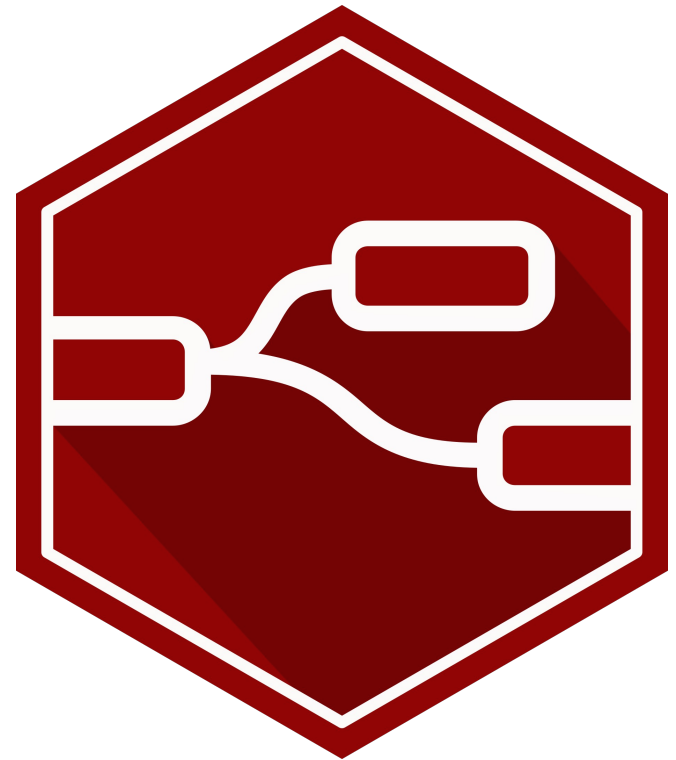


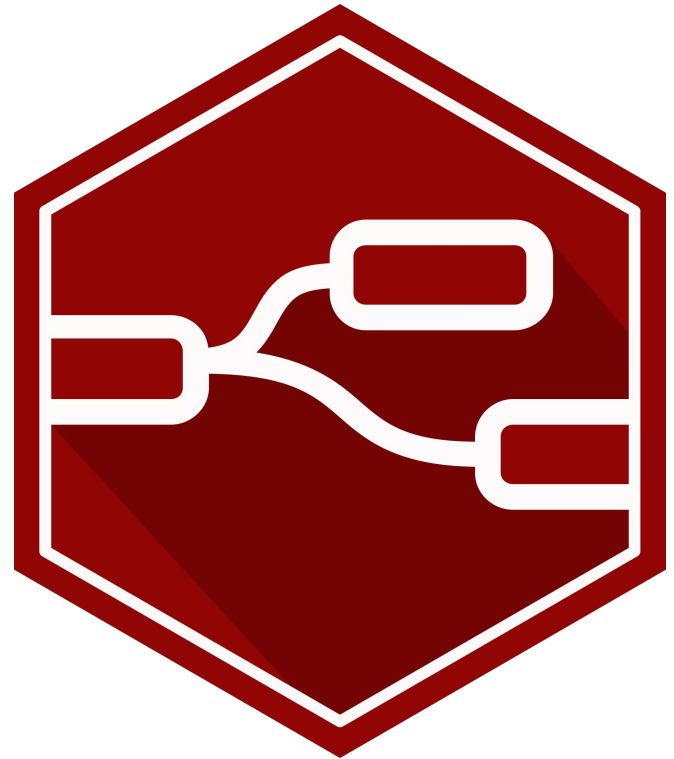
# Node RED

Node-RED is an open-source flow-based development tool used for writing together devices, APIs, and online services in a visual manner



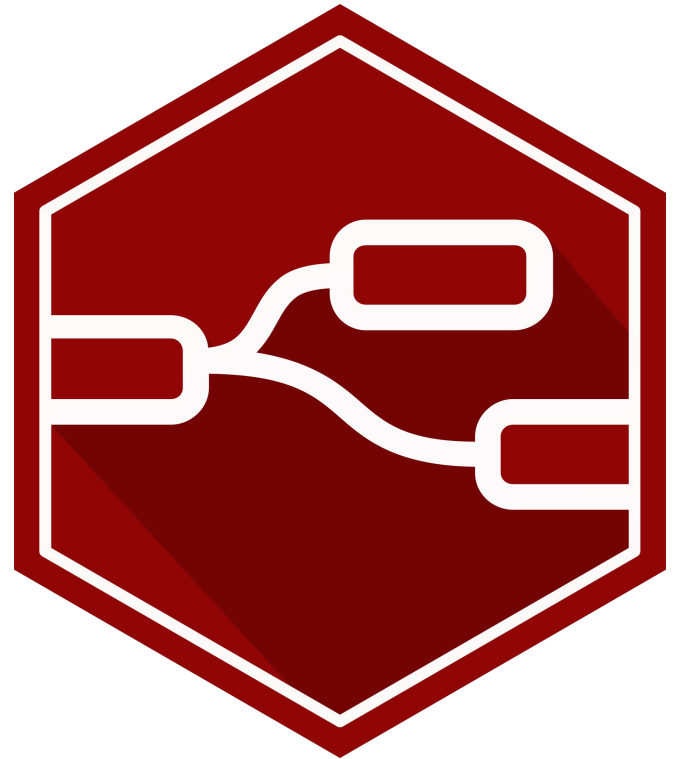
# Node RED

It's widely used in Internet of Things (IoT) projects for connecting devices and data streams



# Node RED

In this case, the Node-RED software being used is an outdated version, so it's vulnerable to a software exploit which enables a webshell on the server



# Privilege Escalation

## Sudo Node

```
sudo node -e 'require("child_process").spawn("/bin/sh", {stdio: [0, 1, 2]})'
```

The Node program is used for execution of JavaScript programs, specifically ones written in the Node JS framework

# Privilege Escalation

## Sudo Node

```
sudo node -e 'require("child_process").spawn("/bin/sh", {stdio: [0, 1, 2]})'
```

Since we have sudo permissions with Node on this system, we can use the above command to open a privileged shell on the system