

Steps of procedure for connecting AWS Lambda with Node-RED directly:

- 1) Make sure you have a public address for the Node-RED running on your Raspberry Pi. If you don't have one, the easiest way to get one is through 'ngrok'. You'll get a free random domain name for 8 hrs.
- 2) Next, use the below code in your lambda function to connect the AWS Lambda with Node-RED.

```
const https = require('https');
exports.handler = (event, context, callback) => {
  var options = {
    hostname: '{Node-RED's public address}',
    path: '/alexa',
    port: 443,
    method: 'POST',
    rejectUnauthorized: false,
    headers: {
      'Content-Type': 'application/json',
      //'Authorization': 'Basic
UnB6bDpvbShxxxxxxxxxxxxxx=='
    }
  };

  const req = https.request(options, (res) => {
    let body = '';
    console.log('Status:', res.statusCode);
    console.log('Headers:',
JSON.stringify(res.headers));
    res.setEncoding('utf8');
    res.on('data', (chunk) => body += chunk);
    res.on('end', () => {
```

```

        console.log('Successfully processed HTTPS
response');
        body = JSON.parse(body);
        callback(null, body);
    });
});
req.on('error', callback);
req.write(JSON.stringify(event));
req.end();
};
//For more information see the HTTPS module
documentation at https://nodejs.org/api/https.html.

```

- 3) Next, use the below flow in your Node-RED to get the data from AWS Lambda. I have created a flow to control a relay connected to pin 7 on the Raspberry Pi.

```

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oc":"","x":150,"y":60,"wires":[["2589d2d3.55dd4e","dfec722f.615a9"]]},{"id":"78ffcc79.d331
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```

```

\response\": {\n      \outputSpeech\": {\n          \type\": \"PlainText\", \n
\text\": \"Turning on the light..\" \n      }, \n      \shouldEndSession\": true \n
} \n }\", \"output\": \"str\", \"x\": 540, \"y\": 300, \"wires\": [[\"7dd8cd59.ec4454\"]]], {\"id\": \"cdef38ca.cd8668
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\text\": \"Turning off the light..\" \n          }, \n          \shouldEndSession\": true \n
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\response\": {\n          \outputSpeech\": {\n              \type\": \"PlainText\", \n
\text\": \"Welcome, you can ask me to turn on or turn off the lights.\" \n          }, \n
\shouldEndSession\": true \n
} \n }\", \"output\": \"str\", \"x\": 540, \"y\": 260, \"wires\": [[\"7dd8cd59.ec4454\"]]], {\"id\": \"7dd8cd59.ec4454
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\version\": \"1.0\", \n      \response\": {\n          \outputSpeech\": {\n
\type\": \"PlainText\", \n          \text\": \"Sorry. I did not understand that.\" \n
}, \n          \shouldEndSession\": true \n
} \n }\", \"output\": \"str\", \"x\": 540, \"y\": 380, \"wires\": [[\"7dd8cd59.ec4454\"]]]}

```

- 4) Next, save the function and try sending some data from Alexa to AWS Lambda and then to Node-RED. It should work.