

# Node-RED

## Spustenie nástroja Node-RED

- docker-compose.yml

```
version: "3.8"

services:
  node-red:
    image: nodered/node-red:latest
    environment:
      - TZ=Europe/Amsterdam
    ports:
      - "1880:1880"
    networks:
      - internal_net
    volumes:
      - ./data:/data

networks:
  internal_net:
```

- docker-compose up -d

## Spustenie databázy

- docker-compose.yml

```
version: '3.8'

services:
  postgres:
    image: postgres:14-alpine
    ports:
      - 5432:5432
    volumes:
      - ./postgres:/var/lib/postgresql/data
    environment:
      - POSTGRES_PASSWORD=node-red-pass
      - POSTGRES_USER=node-red-user
      - POSTGRES_DB=node-red-db
```

- docker-compose up -d

## Interakcia s databázou

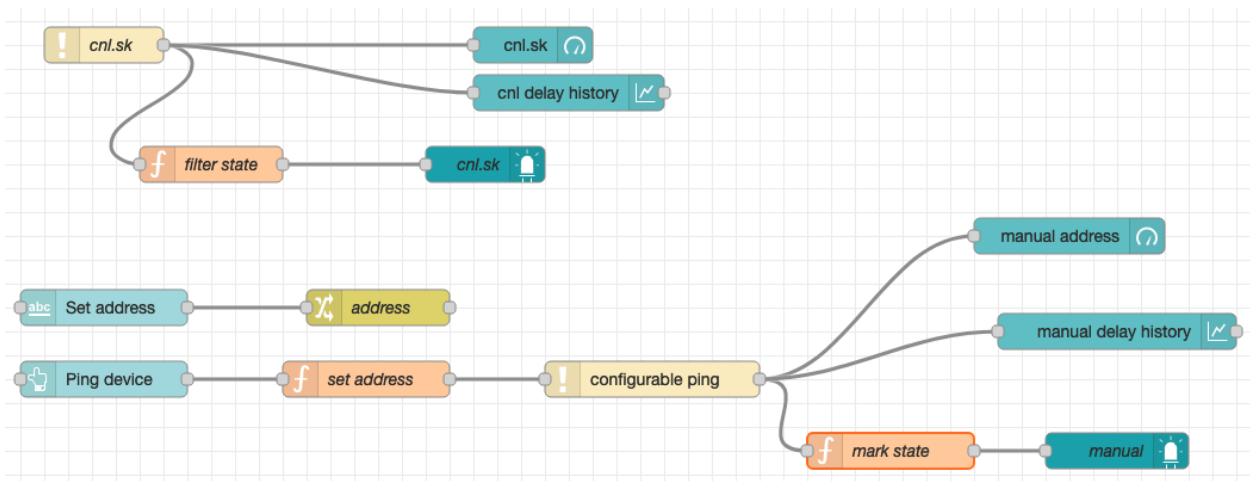
user: node-red-user  
password: node-red-pass  
database: node-red-db

```
petija@vnet2:/opt/apps/postgresql$ docker exec -it b4c4851bd570 /bin/bash
b4c4851bd570:/# psql -U node-red-user node-red-db
psql (14.11)
Type "help" for help.

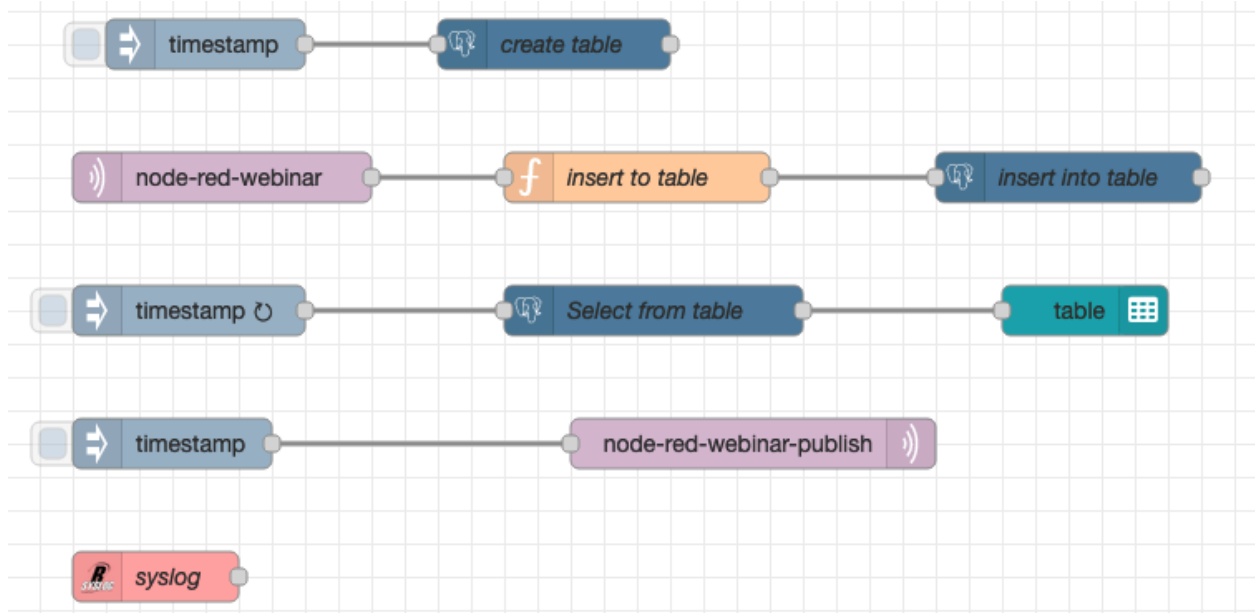
node-red-db=# select * from mqtttable;
 id | town      | temperature
----+-----+-----
  1 | Kosice   |          13
  2 | Presov   |          13
  3 | Bratislava |         27
  4 | Zilina   |           8
(4 rows)
```

## Vytváranie tokov

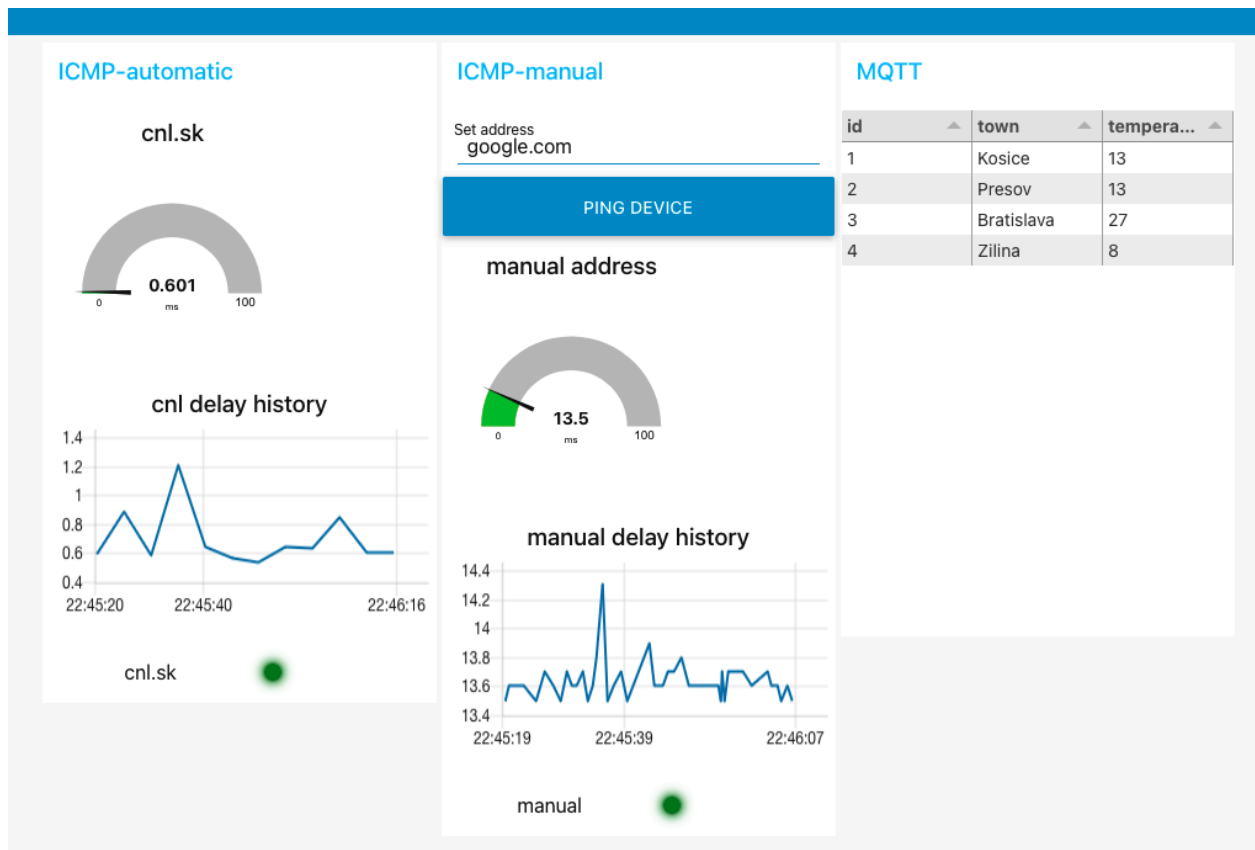
### ICMP



## DB, MQTT



## Vytvorenie Dashboard-u



# MQTT

URL: <https://www.hivemq.com/demos/websocket-client/>

Host: mqtt-dashboard.com

MQTT publish topic: node-red-webinar

MQTT subscribe topic: node-red-webinar-publish

```
{
  "town": "Kosice",
  "temp": 31
}
```

# Node-RED Flow

```
[
  {
    "id": "722fddfbef2ddf0d",
    "type": "tab",
    "label": "SNMP",
    "disabled": false,
    "info": "",
    "env": []
  },
  {
    "id": "975cc394.0dc9d",
    "type": "tab",
    "label": "ICMP",
    "disabled": false,
    "info": ""
  },
  {
    "id": "6171e1b50ac44a6a",
    "type": "tab",
    "label": "MQTT",
    "disabled": false,
    "info": "",
    "env": []
  },
  {
    "id": "452e3d171c53b048",
    "type": "ui_group",
    "name": "Manual",
    "tab": "",
    "order": 2,
    "disp": true,
    "width": 12,
    "collapse": false,
  }
]
```

```
"className": ""
},
{
  "id": "48c0ac191c1ebf5d",
  "type": "ui_spacer",
  "z": "975cc394.0dc9d",
  "name": "spacer",
  "group": "",
  "order": 3,
  "width": 1,
  "height": 1
},
{
  "id": "dff45fd7775ca4ef",
  "type": "ui_spacer",
  "z": "975cc394.0dc9d",
  "name": "spacer",
  "group": "",
  "order": 4,
  "width": 1,
  "height": 1
},
{
  "id": "c09a844710439967",
  "type": "ui_spacer",
  "z": "975cc394.0dc9d",
  "name": "spacer",
  "group": "",
  "order": 5,
  "width": 1,
  "height": 1
},
{
  "id": "0f1c0e3448779475",
  "type": "ui_spacer",
  "z": "975cc394.0dc9d",
  "name": "spacer",
  "group": "",
  "order": 6,
  "width": 1,
  "height": 1
},
{
  "id": "6b1a87e5b484cc27",
  "type": "ui_spacer",
  "z": "975cc394.0dc9d",
  "name": "spacer",
  "group": "",
  "order": 8,
  "width": 9,
```

```
"height": 1
},
{
  "id": "f42ec8490a766483",
  "type": "ui_spacer",
  "z": "975cc394.0dc9d",
  "name": "spacer",
  "group": "",
  "order": 9,
  "width": 13,
  "height": 1
},
{
  "id": "00acb10a07c6d2e4",
  "type": "ui_spacer",
  "z": "975cc394.0dc9d",
  "name": "spacer",
  "group": "",
  "order": 12,
  "width": 1,
  "height": 1
},
{
  "id": "2f974c79e37c42c3",
  "type": "ui_spacer",
  "z": "975cc394.0dc9d",
  "name": "spacer",
  "group": "",
  "order": 13,
  "width": 1,
  "height": 1
},
{
  "id": "f04fa8f77ca25778",
  "type": "ui_spacer",
  "z": "975cc394.0dc9d",
  "name": "spacer",
  "group": "",
  "order": 14,
  "width": 1,
  "height": 1
},
{
  "id": "f0bf37e2ef594a84",
  "type": "ui_spacer",
  "z": "975cc394.0dc9d",
  "name": "spacer",
  "group": "",
  "order": 15,
  "width": 1,
```

```
"height": 1
},
{
  "id": "42fb2e1d570779ec",
  "type": "ui_spacer",
  "z": "975cc394.0dc9d",
  "name": "spacer",
  "group": "",
  "order": 17,
  "width": 9,
  "height": 1
},
{
  "id": "5bad64ac2afaaf11",
  "type": "ui_spacer",
  "z": "975cc394.0dc9d",
  "name": "spacer",
  "group": "452e3d171c53b048",
  "order": 2,
  "width": 6,
  "height": 1
},
{
  "id": "fc23cad01ec78874",
  "type": "ui_spacer",
  "z": "975cc394.0dc9d",
  "name": "spacer",
  "group": "452e3d171c53b048",
  "order": 4,
  "width": 6,
  "height": 1
},
{
  "id": "38cbccad8f63df6b",
  "type": "ui_spacer",
  "z": "975cc394.0dc9d",
  "name": "spacer",
  "group": "452e3d171c53b048",
  "order": 8,
  "width": 8,
  "height": 1
},
{
  "id": "f65279bc03fbcac8",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 2,
  "width": 1,
```

```
"height": 1
},
{
  "id": "8c900dd3bf541184",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 3,
  "width": 1,
  "height": 1
},
{
  "id": "0efcf071cadb8d0e",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 4,
  "width": 1,
  "height": 1
},
{
  "id": "204cfd0626eb513e",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 5,
  "width": 1,
  "height": 1
},
{
  "id": "0debb3cf88f22f8f",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 6,
  "width": 1,
  "height": 1
},
{
  "id": "abc65d4d1ff0dae6",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 7,
  "width": 1,
```



```
"height": 1
},
{
  "id": "b47a9d6d243907bf",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 8,
  "width": 1,
  "height": 1
},
{
  "id": "cb70dd376f95c929",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 9,
  "width": 1,
  "height": 1
},
{
  "id": "b45e42a0490132ed",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 10,
  "width": 1,
  "height": 1
},
{
  "id": "6b62336f303d3209",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 11,
  "width": 1,
  "height": 1
},
{
  "id": "492cfdbfae6e9d8c",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 12,
  "width": 1,
```

```
"height": 1
},
{
  "id": "86434b8d6c66c627",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 13,
  "width": 1,
  "height": 1
},
{
  "id": "992c4930f237161a",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 14,
  "width": 1,
  "height": 1
},
{
  "id": "55fbd25e7029baf1",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 15,
  "width": 1,
  "height": 1
},
{
  "id": "a051b2823934d1d6",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 16,
  "width": 1,
  "height": 1
},
{
  "id": "954be434ca56699a",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 17,
  "width": 1,
```

```
"height": 1
},
{
  "id": "9b3bf7372b54205a",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 18,
  "width": 3,
  "height": 1
},
{
  "id": "8b5f76d429dd7f9a",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 20,
  "width": 5,
  "height": 1
},
{
  "id": "c162bb613f4ad4f4",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 21,
  "width": 3,
  "height": 1
},
{
  "id": "ec847f482daed2f8",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 22,
  "width": 5,
  "height": 1
},
{
  "id": "de57a8de60e08a84",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 23,
  "width": 3,
```

```
"height": 1
},
{
  "id": "363a841b19ee1979",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 24,
  "width": 5,
  "height": 1
},
{
  "id": "bc7c67bb852295b4",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 25,
  "width": 3,
  "height": 1
},
{
  "id": "2e9c30abd8ff3c7b",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 26,
  "width": 5,
  "height": 1
},
{
  "id": "56754d9ec43ee6d2",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 27,
  "width": 3,
  "height": 1
},
{
  "id": "6a1688ed866f7245",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "",
  "order": 28,
  "width": 5,
```

```
"height": 1
},
{
  "id": "76b7cd6e8e9ee997",
  "type": "postgreSQLConfig",
  "name": "",
  "host": "147.232.241.45",
  "hostFieldType": "str",
  "port": "5432",
  "portFieldType": "num",
  "database": "node-red-db",
  "databaseFieldType": "str",
  "ssl": "false",
  "sslFieldType": "bool",
  "applicationName": "",
  "applicationNameType": "str",
  "max": "100",
  "maxFieldType": "num",
  "idle": "1000",
  "idleFieldType": "num",
  "connectionTimeout": "10000",
  "connectionTimeoutFieldType": "num",
  "user": "node-red-user",
  "userFieldType": "str",
  "password": "node-red-pass",
  "passwordFieldType": "str"
},
{
  "id": "f55bfadc436d3677",
  "type": "ui_tab",
  "name": "Home",
  "icon": "dashboard",
  "disabled": false,
  "hidden": false
},
{
  "id": "1061d7d359f4dc83",
  "type": "ui_group",
  "name": "ICMP-automatic",
  "tab": "f55bfadc436d3677",
  "order": 1,
  "disp": true,
  "width": "6",
  "collapse": false,
  "className": ""
},
{
  "id": "d7f4a946771aa25f",
  "type": "ui_group",
  "name": "ICMP-manual",
```

```
"tab": "f55bfadc436d3677",
"order": 2,
"disp": true,
"width": "6",
"collapse": false,
"className": ""
},
{
  "id": "10ec6478dbd9c09c",
  "type": "ui_base",
  "theme": {
    "name": "theme-light",
    "lightTheme": {
      "default": "#0094CE",
      "baseColor": "#0094CE",
      "baseFont": "-apple-system,BlinkMacSystemFont,Segoe
UI,Roboto,Oxygen-Sans,Ubuntu,Cantarell,Helvetica Neue,sans-serif",
      "edited": true,
      "reset": false
    },
    "darkTheme": {
      "default": "#097479",
      "baseColor": "#097479",
      "baseFont": "-apple-system,BlinkMacSystemFont,Segoe
UI,Roboto,Oxygen-Sans,Ubuntu,Cantarell,Helvetica Neue,sans-serif",
      "edited": false
    },
    "customTheme": {
      "name": "Untitled Theme 1",
      "default": "#4B7930",
      "baseColor": "#4B7930",
      "baseFont": "-apple-system,BlinkMacSystemFont,Segoe
UI,Roboto,Oxygen-Sans,Ubuntu,Cantarell,Helvetica Neue,sans-serif"
    },
    "themeState": {
      "base-color": {
        "default": "#0094CE",
        "value": "#0094CE",
        "edited": false
      },
      "page-titlebar-backgroundColor": {
        "value": "#0094CE",
        "edited": false
      },
      "page-backgroundColor": {
        "value": "#fafafa",
        "edited": false
      },
      "page-sidebar-backgroundColor": {
        "value": "#ffffff",
```

```
    "edited": false
  },
  "group-textColor": {
    "value": "#1bbfff",
    "edited": false
  },
  "group-borderColor": {
    "value": "#ffffff",
    "edited": false
  },
  "group-backgroundColor": {
    "value": "#ffffff",
    "edited": false
  },
  "widget-textColor": {
    "value": "#111111",
    "edited": false
  },
  "widget-backgroundColor": {
    "value": "#0094ce",
    "edited": false
  },
  "widget-borderColor": {
    "value": "#ffffff",
    "edited": false
  },
  "base-font": {
    "value": "-apple-system,BlinkMacSystemFont,Segoe
UI,Roboto,Oxygen-Sans,Ubuntu,Cantarell,Helvetica Neue,sans-serif"
  }
},
"angularTheme": {
  "primary": "indigo",
  "accents": "blue",
  "warn": "red",
  "background": "grey",
  "palette": "light"
}
},
"site": {
  "name": "Node-RED Dashboard",
  "hideToolbar": "false",
  "allowSwipe": "false",
  "lockMenu": "false",
  "allowTempTheme": "true",
  "dateFormat": "DD/MM/YYYY",
  "sizes": {
    "sx": 48,
    "sy": 48,
    "gx": 6,
```

```
        "gy": 6,  
        "cx": 6,  
        "cy": 6,  
        "px": 0,  
        "py": 0  
    }  
    }  
  },  
  {  
    "id": "bccf6c921fbb6fd9",  
    "type": "ui_group",  
    "name": "MQTT",  
    "tab": "f55bfadc436d3677",  
    "order": 3,  
    "disp": true,  
    "width": "6",  
    "collapse": false,  
    "className": ""  
  },  
  {  
    "id": "d3a4ef22c259219c",  
    "type": "mqtt-broker",  
    "name": "Mqtt Broker",  
    "broker": "mqtt-dashboard.com",  
    "port": "1883",  
    "clientid": "",  
    "autoConnect": true,  
    "usetls": false,  
    "protocolVersion": "4",  
    "keepalive": "60",  
    "cleansession": true,  
    "autoUnsubscribe": true,  
    "birthTopic": "",  
    "birthQos": "0",  
    "birthRetain": "false",  
    "birthPayload": "",  
    "birthMsg": {},  
    "closeTopic": "",  
    "closeQos": "0",  
    "closeRetain": "false",  
    "closePayload": "",  
    "closeMsg": {},  
    "willTopic": "",  
    "willQos": "0",  
    "willRetain": "false",  
    "willPayload": "",  
    "willMsg": {},  
    "userProps": "",  
    "sessionExpiry": ""  
  },  
}
```



```
{
  "id": "375bcdd1cc9901bd",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "1061d7d359f4dc83",
  "order": 2,
  "width": 2,
  "height": 1
},
{
  "id": "804512f5645391a2",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "1061d7d359f4dc83",
  "order": 3,
  "width": 2,
  "height": 1
},
{
  "id": "7a62eae640c76d49",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "1061d7d359f4dc83",
  "order": 4,
  "width": 2,
  "height": 1
},
{
  "id": "db0beb1afdd4c015",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "1061d7d359f4dc83",
  "order": 5,
  "width": 2,
  "height": 1
},
{
  "id": "7d4aeb151de92450",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "1061d7d359f4dc83",
  "order": 8,
  "width": 2,
  "height": 1
},
}
```

```
{
  "id": "65cce171d5983a0a",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "d7f4a946771aa25f",
  "order": 4,
  "width": 2,
  "height": 1
},
{
  "id": "259e19e820f761d9",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "d7f4a946771aa25f",
  "order": 5,
  "width": 2,
  "height": 1
},
{
  "id": "107dacdae08ad4db",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "d7f4a946771aa25f",
  "order": 6,
  "width": 2,
  "height": 1
},
{
  "id": "56a6d511fb8d080d",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "d7f4a946771aa25f",
  "order": 7,
  "width": 2,
  "height": 1
},
{
  "id": "f27d600d7dc2e83d",
  "type": "ui_spacer",
  "z": "6171e1b50ac44a6a",
  "name": "spacer",
  "group": "d7f4a946771aa25f",
  "order": 10,
  "width": 2,
  "height": 1
},
}
```

```
{
  "id": "0887b3237dbbda98",
  "type": "snmp",
  "z": "722fddf2bef2ddf0d",
  "host": "10.10.10.15",
  "version": "2c",
  "timeout": 5,
  "community": "cisco",
  "auth": "noAuthNoPriv",
  "authprot": "MD5",
  "privprot": "DES",
  "oids": "1.3.6.1.2.1.1.5.0",
  "name": "system_name",
  "x": 340,
  "y": 100,
  "wires": [
    [
      "6cf70a16f93fcd35"
    ]
  ],
},
{
  "id": "cf2e5f1b03a8d02f",
  "type": "inject",
  "z": "722fddf2bef2ddf0d",
  "name": "",
  "props": [
    {
      "p": "payload"
    },
    {
      "p": "topic",
      "vt": "str"
    }
  ],
  "repeat": "",
  "crontab": "",
  "once": false,
  "onceDelay": 0.1,
  "topic": "",
  "payload": "",
  "payloadType": "date",
  "x": 100,
  "y": 100,
  "wires": [
    [
      "0887b3237dbbda98"
    ]
  ]
},
},
```

```
{
  "id": "6cf70a16f93fcd35",
  "type": "function",
  "z": "722fddfbef2ddf0d",
  "name": "function 21",
  "func": "msg.payload = msg.payload[0].value.toString();\nreturn msg;",
  "outputs": 1,
  "timeout": "",
  "noerr": 0,
  "initialize": "",
  "finalize": "",
  "libs": [],
  "x": 610,
  "y": 100,
  "wires": [
    []
  ]
},
{
  "id": "4065334a.cd382c",
  "type": "catch",
  "z": "975cc394.0dc9d",
  "name": "",
  "scope": null,
  "uncaught": false,
  "x": 2200,
  "y": 3480,
  "wires": [
    []
  ]
},
{
  "id": "10801da9.cd9532",
  "type": "ui_gauge",
  "z": "975cc394.0dc9d",
  "name": "",
  "group": "1061d7d359f4dc83",
  "order": 1,
  "width": 4,
  "height": 4,
  "gtype": "gage",
  "title": "cnl.sk",
  "label": "ms",
  "format": "{{value}}",
  "min": 0,
  "max": "100",
  "colors": [
    "#00b500",
    "#e6e600",
    "#ca3838"
  ]
}
```

```

],
"seg1": "",
"seg2": "",
"diff": false,
"className": "",
"x": 450,
"y": 40,
"wires": []
},
{
  "id": "7f853d21.fd0414",
  "type": "function",
  "z": "975cc394.0dc9d",
  "name": "filter state",
  "func": "\nvar trueMsg = { payload: true };\nvar falseMsg = { payload: false
};\n\n\nif(msg.payload===false)\n{\n  return falseMsg; \n}\nelse{\n  return trueMsg;
\n}\n}\n\n\n",
  "outputs": 1,
  "timeout": "",
  "noerr": 0,
  "initialize": "",
  "finalize": "",
  "libs": [],
  "x": 180,
  "y": 140,
  "wires": [
    [
      "5c788d61.af2a44"
    ]
  ]
},
{
  "id": "d38bccae.c1b68",
  "type": "ping",
  "z": "975cc394.0dc9d",
  "mode": null,
  "name": "cnl.sk",
  "host": "cnl.sk",
  "timer": "5",
  "inputs": 0,
  "x": 90,
  "y": 40,
  "wires": [
    [
      "10801da9.cd9532",
      "7f853d21.fd0414",
      "1932df46b1766284"
    ]
  ]
},
},

```

```
{
  "id": "5c788d61.af2a44",
  "type": "ui_led",
  "z": "975cc394.0dc9d",
  "order": 7,
  "group": "1061d7d359f4dc83",
  "width": 4,
  "height": 1,
  "label": "cni.sk",
  "labelPlacement": "left",
  "labelAlignment": "center",
  "colorForValue": [
    {
      "color": "#008000",
      "value": "true",
      "valueType": "bool"
    },
    {
      "color": "#ff0000",
      "value": "false",
      "valueType": "bool"
    }
  ],
  "allowColorForValueInMessage": false,
  "shape": "circle",
  "showGlow": true,
  "name": "cni.sk",
  "x": 410,
  "y": 140,
  "wires": [],
  "info": "HELLO"
},
{
  "id": "1932df46b1766284",
  "type": "ui_chart",
  "z": "975cc394.0dc9d",
  "name": "",
  "group": "1061d7d359f4dc83",
  "order": 6,
  "width": 6,
  "height": 4,
  "label": "cni delay history",
  "chartType": "line",
  "legend": "false",
  "xformat": "HH:mm:ss",
  "interpolate": "linear",
  "nodata": "",
  "dot": false,
  "ymin": "",
  "ymax": ""
}
```

```
"removeOlder": 1,
"removeOlderPoints": "",
"removeOlderUnit": "60",
"cutout": 0,
"useOneColor": false,
"useUTC": false,
"colors": [
"#1f77b4",
"#aec7e8",
"#ff7f0e",
"#2ca02c",
"#98df8a",
"#d62728",
"#ff9896",
"#9467bd",
"#c5b0d5"
],
"outputs": 1,
"useDifferentColor": false,
"className": "",
"x": 480,
"y": 80,
"wires": [
[]
],
{
"id": "1a59a0e9719d1dd3",
"type": "conf ping",
"z": "975cc394.0dc9d",
"name": "",
"host": "",
"timeout": "5",
"requests": "1",
"x": 550,
"y": 320,
"wires": [
[
"ea3bc5c329d88b6a",
"f25e2e82595302d5",
"165c5ffd2c404e03"
]
]
},
{
"id": "b33d5b173ce10589",
"type": "change",
"z": "975cc394.0dc9d",
"name": "address",
"rules": [
```

```
{
  "t": "set",
  "p": "address",
  "pt": "flow",
  "to": "payload",
  "tot": "msg"
}
],
"action": "",
"property": "",
"from": "",
"to": "",
"reg": false,
"x": 320,
"y": 260,
"wires": [
  []
]
},
{
  "id": "1b1f44a7614b393b",
  "type": "function",
  "z": "975cc394.0dc9d",
  "name": "set address",
  "func": "msg.host = flow.get(\"address\");\n\nreturn msg;",
  "outputs": 1,
  "timeout": "",
  "noerr": 0,
  "initialize": "",
  "finalize": "",
  "libs": [],
  "x": 310,
  "y": 320,
  "wires": [
    [
      "1a59a0e9719d1dd3"
    ]
  ]
},
{
  "id": "68a569134c8f941b",
  "type": "ui_button",
  "z": "975cc394.0dc9d",
  "name": "",
  "group": "d7f4a946771aa25f",
  "order": 2,
  "width": 6,
  "height": 1,
  "passthru": false,
  "label": "Ping device",
}
```



```
"tooltip": "",
"color": "",
"bgcolor": "",
"className": "",
"icon": "",
"payload": "",
"payloadType": "str",
"topic": "topic",
"topicType": "msg",
"x": 90,
"y": 320,
"wires": [
  [
    "1b1f44a7614b393b"
  ]
],
},
{
  "id": "ea3bc5c329d88b6a",
  "type": "ui_gauge",
  "z": "975cc394.0dc9d",
  "name": "",
  "group": "d7f4a946771aa25f",
  "order": 3,
  "width": 4,
  "height": 4,
  "gtype": "gage",
  "title": "manual address",
  "label": "ms",
  "format": "{{value}}",
  "min": 0,
  "max": "100",
  "colors": [
    "#00b500",
    "#e6e600",
    "#ca3838"
  ],
  "seg1": "",
  "seg2": "",
  "diff": false,
  "className": "",
  "x": 900,
  "y": 200,
  "wires": []
},
{
  "id": "6ca01566f12b3667",
  "type": "ui_led",
  "z": "975cc394.0dc9d",
  "order": 9,
```

```

"group": "d7f4a946771aa25f",
"width": 4,
"height": 1,
"label": "manual",
"labelPlacement": "left",
"labelAlignment": "center",
"colorForValue": [
{
    "color": "#008000",
    "value": "true",
    "valueType": "bool"
},
{
    "color": "#ff0000",
    "value": "false",
    "valueType": "bool"
}
],
"allowColorForValueInMessage": false,
"shape": "circle",
"showGlow": true,
"name": "manual",
"x": 940,
"y": 380,
"wires": [],
"info": "HELLO"
},
{
    "id": "f25e2e82595302d5",
    "type": "function",
    "z": "975cc394.0dc9d",
    "name": "mark state",
    "func": "\nvar trueMsg = { payload: true };\nvar falseMsg = { payload: false
};\n\n\nif(msg.payload===false)\n{\n    return falseMsg; \n}\nelse{\n    return trueMsg;
\n\n}",
    "outputs": 1,
    "timeout": "",
    "noerr": 0,
    "initialize": "",
    "finalize": "",
    "libs": [],
    "x": 750,
    "y": 380,
    "wires": [
    [
        "6ca01566f12b3667"
    ]
    ]
},
{

```

```
"id": "752eda434640bf27",
"type": "ui_text_input",
"z": "975cc394.0dc9d",
"name": "",
"label": "Set address",
"tooltip": "",
"group": "d7f4a946771aa25f",
"order": 1,
"width": 6,
"height": 1,
"passthru": true,
"mode": "text",
"delay": 300,
"topic": "payload",
"sendOnBlur": true,
"className": "",
"topicType": "msg",
"x": 90,
"y": 260,
"wires": [
  [
    "b33d5b173ce10589"
  ]
]
},
{
  "id": "165c5ffd2c404e03",
  "type": "ui_chart",
  "z": "975cc394.0dc9d",
  "name": "",
  "group": "d7f4a946771aa25f",
  "order": 8,
  "width": 6,
  "height": 4,
  "label": "manual delay history",
  "chartType": "line",
  "legend": "false",
  "xformat": "HH:mm:ss",
  "interpolate": "linear",
  "nodata": "",
  "dot": false,
  "ymin": "",
  "ymax": "",
  "removeOlder": 1,
  "removeOlderPoints": "",
  "removeOlderUnit": "60",
  "cutout": 0,
  "useOneColor": false,
  "useUTC": false,
  "colors": [
```

```
"#1f77b4",
"#aec7e8",
"#ff7f0e",
"#2ca02c",
"#98df8a",
"#d62728",
"#ff9896",
"#9467bd",
"#c5b0d5"
],
"outputs": 1,
"useDifferentColor": false,
"className": "",
"x": 940,
"y": 280,
"wires": [
  []
],
},
{
  "id": "371d122b2077d6b7",
  "type": "syslog-input2",
  "z": "6171e1b50ac44a6a",
  "name": "syslog",
  "socktype": "udp",
  "address": "",
  "port": "514",
  "topic": "",
  "x": 130,
  "y": 360,
  "wires": [
    []
  ],
},
{
  "id": "1eb27fd379b25d3e",
  "type": "postgresql",
  "z": "6171e1b50ac44a6a",
  "name": "create table",
  "query": "CREATE TABLE mqtttable(\n  ID serial PRIMARY KEY NOT NULL,\nTOWN VARCHAR(50) NOT NULL,\n  TEMPERATURE INT NOT NULL\n);",
  "postgreSQLConfig": "76b7cd6e8e9ee997",
  "split": false,
  "rowsPerMsg": "1",
  "outputs": 1,
  "x": 370,
  "y": 40,
  "wires": [
    []
  ]
}
```

```
},
{
  "id": "f1e89f0ae9c99deb",
  "type": "inject",
  "z": "6171e1b50ac44a6a",
  "name": "",
  "props": [
    {
      "p": "payload"
    },
    {
      "p": "topic",
      "vt": "str"
    }
  ],
  "repeat": "",
  "crontab": "",
  "once": false,
  "onceDelay": 0.1,
  "topic": "",
  "payload": "",
  "payloadType": "date",
  "x": 160,
  "y": 40,
  "wires": [
    [
      "1eb27fd379b25d3e"
    ]
  ],
},
{
  "id": "3f920e946e567d2f",
  "type": "postgresql",
  "z": "6171e1b50ac44a6a",
  "name": "insert into table",
  "query": "",
  "postgreSQLConfig": "76b7cd6e8e9ee997",
  "split": false,
  "rowsPerMsg": 1,
  "outputs": 1,
  "x": 680,
  "y": 120,
  "wires": [
    []
  ],
},
{
  "id": "78f2abaa3fe53bd5",
  "type": "function",
  "z": "6171e1b50ac44a6a",
```

```
"name": "insert to table",
"func": "\nvar town = msg.payload.town;\nvar temp = msg.payload.temp;\n\nmsg.query
= `INSERT INTO mqtttable(town, temperature) VALUES('${town}', ${temp});`\n\nreturn msg;";
"outputs": 1,
"timeout": "",
"noerr": 0,
"initialize": "",
"finalize": "",
"libs": [],
"x": 420,
"y": 120,
"wires": [
  [
    "3f920e946e567d2f"
  ]
],
},
{
  "id": "0eea9f196d5092aa",
  "type": "postgresql",
  "z": "6171e1b50ac44a6a",
  "name": "Select from table",
  "query": "SELECT * FROM mqtttable;",
  "postgreSQLConfig": "76b7cd6e8e9ee997",
  "split": false,
  "rowsPerMsg": 1,
  "outputs": 1,
  "x": 430,
  "y": 200,
  "wires": [
    [
      "b3a68b5ebc2bd210"
    ]
  ]
},
{
  "id": "89e3222c3712d30e",
  "type": "inject",
  "z": "6171e1b50ac44a6a",
  "name": "",
  "props": [
    {
      "p": "payload"
    },
    {
      "p": "topic",
      "vt": "str"
    }
  ]
},
],
"repeat": "5",
```

```
"crontab": "",
"once": false,
"onceDelay": 0.1,
"topic": "",
"payload": "",
"payloadType": "date",
"x": 150,
"y": 200,
"wires": [
  [
    "0eea9f196d5092aa"
  ]
],
},
{
  "id": "b3a68b5ebc2bd210",
  "type": "ui_table",
  "z": "6171e1b50ac44a6a",
  "group": "bccf6c921fbb6fd9",
  "name": "",
  "order": 1,
  "width": 6,
  "height": 8,
  "columns": [],
  "outputs": 0,
  "cts": false,
  "x": 690,
  "y": 200,
  "wires": []
},
{
  "id": "670068b4e8383061",
  "type": "mqtt in",
  "z": "6171e1b50ac44a6a",
  "name": "",
  "topic": "node-red-webinar",
  "qos": "0",
  "datatype": "json",
  "broker": "d3a4ef22c259219c",
  "nl": false,
  "rap": true,
  "rh": 0,
  "inputs": 0,
  "x": 170,
  "y": 120,
  "wires": [
    [
      "78f2abaa3fe53bd5"
    ]
  ]
}
```

```
},
{
  "id": "4eb5f702252a05a5",
  "type": "inject",
  "z": "6171e1b50ac44a6a",
  "name": "",
  "props": [
    {
      "p": "payload"
    },
    {
      "p": "topic",
      "vt": "str"
    }
  ],
  "repeat": "",
  "crontab": "",
  "once": false,
  "onceDelay": 0.1,
  "topic": "",
  "payload": "",
  "payloadType": "date",
  "x": 140,
  "y": 280,
  "wires": [
    [
      "5f071b45f334e98a"
    ]
  ],
},
{
  "id": "5f071b45f334e98a",
  "type": "mqtt out",
  "z": "6171e1b50ac44a6a",
  "name": "",
  "topic": "node-red-webinar-publish",
  "qos": "",
  "retain": "",
  "respTopic": "",
  "contentType": "",
  "userProps": "",
  "correl": "",
  "expiry": "",
  "broker": "d3a4ef22c259219c",
  "x": 490,
  "y": 280,
  "wires": []
}
```

]