

# Neuinstallation ioBroker auf einem Banana Pi M2 Ultra

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## Das Grundsystems

### Installation

Die Verwendung von InfluxDB 2.x setzt ein 64-bit Betriebssystem voraus.

Ein Desktop bzw. eine vollständige grafische Oberfläche wird nicht benötigt. Daher bezeichnet man ein solches System als „Headless“.

Somit basiert dieses Heimautomatisierungsprojekt auf einem Banana Pi M2 Ultra (32bit).

Installation siehe [hier](#).

### Konfiguration

Während des Bootvorganges erhält der Raspberry eine IP Adresse vom Router. Diese kann über die entsprechende Weboberfläche des Routers ermittelt werden.

```
# Grundsystem auf den aktuellen Stand bringen:
```

```
ssh -l root <IP>
```

```
# default Passwort: "1234"
```

```
# Passwort ändern Dialog abarbeiten!
```

```
apt-get update && sudo apt-get upgrade
```

```
apt-get install aptitude mc apt-transport-https software-properties-common  
wget
```

## Feste IP für eth0 einstellen



Seit Armbian auf Desibian 13 „Trixie“ basiert wird Netplan zur Konfiguration der Netzwerkschnittstellen verwendet.  
[Hier](#) gibt es hilfreiche Konfigurationsbeispiele.

```
mv /etc/netplan/10-dhcp-all-interfaces.yaml /root/  
mcedit /etc/netplan/20-static-ip.yaml
```

```
network:  
  version: 2  
  renderer: networkd  
  ethernets:  
    end0:  
      addresses:  
        - 192.168.10.11/24  
      routes:  
        - to: default  
          via: 192.168.10.1  
      nameservers:  
        addresses:  
          - 192.168.10.1  
          - 192.168.100.1  
  
reboot  
#
```

## System auf der SATA HDD installieren

Der EMMC-Flash hat mit 8GB (zu) wenig Platz



```
armbian-install
```

Die folgenden Schritte sind **nicht** notwendig, wenn das System auf eine SATA HDD installiert wird.

```
mkdir -p /mnt/sda1  
# UUID der externen HDD ermitteln:  
blkid  
# fstab Eintrag erzeugen  
echo "UUID="xxxxxxxxxxxxxxxxxxxxx" /mnt/sda1 ext4 defaults 0 1" >>  
/etc/fstab  
systemctl daemon-reload  
mount -a
```

## NTP

```
# 1. Check status
timedatectl
# 2. Install if missing (usually pre-installed)
sudo apt update
sudo apt install systemd-timesyncd
# 3. Verify it's active (system clock synchronized: yes, NTP service:
active)
timedatectl
# 4. (Optional) Set your timezone
sudo timedatectl set-timezone Europe/Berlin # Or your local zone
# 5. (Optional) Configure NTP servers (defaults usually work)
sudo nano /etc/systemd/timesyncd.conf
# Uncomment and set servers like: NTP=0.pool.ntp.org 1.pool.ntp.org
# 6. Restart service (if changes made)
sudo systemctl restart systemd-timesyncd
```

## InfluxDB 1.x

Quelle: <https://docs.influxdata.com/influxdb/v1/introduction/install/>

### Installation

```
sudo su
#wget -q https://repos.influxdata.com/influxdata-archive_compat.key
#echo '393e8779c89ac8d958f81f942f9ad7fb82a25e133faddaf92e15b16e6ac9ce4c
influxdata-archive_compat.key' | sha256sum -c && cat influxdata-
archive_compat.key | gpg --dearmor | sudo tee
/etc/apt/trusted.gpg.d/influxdata-archive_compat.gpg > /dev/null
#echo 'deb [signed-by=/etc/apt/trusted.gpg.d/influxdata-archive_compat.gpg]
https://repos.influxdata.com/debian stable main' | sudo tee
/etc/apt/sources.list.d/influxdata.list

# influxdata-archive_compat.key GPG Fingerprint:
9D539D90D3328DC7D6C8D3B9D8FF8E1F7DF8B07E
#wget -q https://repos.influxdata.com/influxdata-archive_compat.key
#echo '393e8779c89ac8d958f81f942f9ad7fb82a25e133faddaf92e15b16e6ac9ce4c
influxdata-archive_compat.key' | sha256sum -c && cat influxdata-
archive_compat.key | gpg --dearmor | sudo tee
/etc/apt/trusted.gpg.d/influxdata-archive_compat.gpg > /dev/null
#echo 'deb [signed-by=/etc/apt/trusted.gpg.d/influxdata-archive_compat.gpg]
https://repos.influxdata.com/debian stable main' | sudo tee
/etc/apt/sources.list.d/influxdata.list

wget -q https://repos.influxdata.com/influxdata-archive.key
gpg --show-keys --with-fingerprint --with-colons ./influxdata-archive.key
```

```
2>&1 | grep -q '^fpr:\+24C975CBA61A024EE1B631787C3D57159FC2F927:$' && cat
influxdata-archive.key | gpg --dearmor | sudo tee
/etc/apt/keyrings/influxdata-archive.gpg > /dev/null
echo 'deb [signed-by=/etc/apt/keyrings/influxdata-archive.gpg]
https://repos.influxdata.com/debian stable main' | sudo tee
/etc/apt/sources.list.d/influxdata.list
```

### apt-get update

```
apt-get install influxdb influxdb-client
```

```
systemctl unmask influxdb.service
systemctl enable influxdb
systemctl start influxdb
systemctl status influxdb
```

## Konfiguration

```
sudo su
influx
> CREATE USER "admin" WITH PASSWORD 'influxdbadmin' WITH ALL PRIVILEGES
> CREATE USER "iobroker" WITH PASSWORD 'iobroker'
> CREATE DATABASE "iobroker"
> GRANT ALL ON "iobroker" TO "iobroker"
> exit
#
mcedit /etc/influxdb/influxdb.conf
[http]
enabled = true
bind-address = ":8086"
auth-enabled = true
log-enabled = true
write-tracing = false
pprof-enabled = true
https-enabled = false
#
systemctl restart influxdb
```

## Datenbankgröße ermitteln

```
sudo su
du -sh /var/lib/influxdb/data/iobrokerdb/
```

## Backups

Quelle:

[https://docs.influxdata.com/influxdb/v1/administration/backup\\_and\\_restore/#back-up-all-databases](https://docs.influxdata.com/influxdb/v1/administration/backup_and_restore/#back-up-all-databases)

## Erstellen

```
sudo su
influxd backup -portable /path/to/backup-destination
# or do it in one line:
cd /; influxd backup -portable /mnt/usb-stick/backup/influxdb/`date +%Y%m%d`
```

## Wiederherstellen

```
sudo su
influxd restore -portable /path/to/backup-destination
```

# InfluxDB 2.x

## Installation

```
sudo su
cd ~
wget -q https://repos.influxdata.com/influxdata-archive_compat.key
echo '393e8779c89ac8d958f81f942f9ad7fb82a25e133faddaf92e15b16e6ac9ce4c
influxdata-archive_compat.key' | sha256sum -c && cat influxdata-
archive_compat.key | gpg --dearmor | sudo tee
/etc/apt/trusted.gpg.d/influxdata-archive_compat.gpg > /dev/null
echo 'deb [signed-by=/etc/apt/trusted.gpg.d/influxdata-archive_compat.gpg]
https://repos.influxdata.com/debian stable main' | sudo tee
/etc/apt/sources.list.d/influxdata.list
apt-get update
apt-get install influxdb2
systemctl start influxdb
systemctl status influxdb
```

## Konfiguration

Die Konfiguration der InfluxDB erfolgt über den Browser via <http://RASPI-IP:8086>.

# Grafana

## Installation

```
sudo su
#wget -q -O /usr/share/keyrings/grafana.key https://apt.grafana.com/gpg.key
#echo "deb [signed-by=/usr/share/keyrings/grafana.key]
```

```
https://apt.grafana.com stable main" | sudo tee -a
/etc/apt/sources.list.d/grafana.list
#wget -q -O - https://packages.grafana.com/gpg.key | sudo apt-key add -
#echo "deb https://packages.grafana.com/oss/deb stable main" | sudo tee -a
/etc/apt/sources.list.d/grafana.list

sudo mkdir -p /etc/apt/keyrings/
wget -q -O - https://apt.grafana.com/gpg.key | gpg --dearmor | sudo tee
/etc/apt/keyrings/grafana.gpg > /dev/null
echo "deb [signed-by=/etc/apt/keyrings/grafana.gpg] https://apt.grafana.com
stable main" | sudo tee -a /etc/apt/sources.list.d/grafana.list

apt-get update
# Install the latest OSS release:
apt-get install -y grafana
# Start System Service aka. Server
systemctl daemon-reload
systemctl start grafana-server
systemctl status grafana-server
systemctl enable grafana-server.service
```

Grafana Server: <http://IP:3000>

## Grafana ohne Login

```
mcedit /etc/grafana/grafana.ini
# [auth.anonymous]
enabled = true
systemctl restart grafana-server
```

## Backup

Quelle: <http://cactusprojects.com/backup-restore-grafana/>

## Erstellen

```
sudo su
cp /var/lib/grafana/grafana.db /path/to/backup-destination
cp /etc/grafana/grafana.ini /path/to/backup-destination
# or do it in one line:
cd /; mkdir /mnt/usb-stick/backup/grafana/`date +%Y%m%d`; cp
/etc/grafana/grafana.ini /mnt/usb-stick/backup/grafana/`date +%Y%m%d`; cp
/var/lib/grafana/grafana.db /mnt/usb-stick/backup/grafana/`date +%Y%m%d`
```

## Wiederherstellen

```
sudo su
cd /path/to/backup-destination
cp grafana.db /var/lib/grafana/
cp grafana.ini /etc/grafana/
```

## ioBroker

### Wiederherstellung

Folgende Backup Dateien via Backitup Adapter wieder einsoielen:

- iobroker\_<TIMESTAMP>\_backupiobroker.tar.gz
- influxDB\_<TIMESTAMP>\_backupiobroker.tar.gz
- grafana\_<TIMESTAMP>\_backupiobroker.tar.gz
- javascripts\_<TIMESTAMP>\_backupiobroker.tar.gz

### Installation

```
sudo su
# automatische Installation:
curl -sLf https://iobroker.net/install.sh | bash -
```

Nach der Installation ist die ioBroker Instanz erreichbar unter <http://<Raspberry-Pi-IP>:8081>.

### Steuerung

```
# ioBroker starten:
iobroker start
# ioBroker stoppen:
iobroker stop
# ioBrker Infos anzeigen
iobroker info
```

### Backups

#### Erstellung

Siehe unten → Script oder per 'Backitup' Adapter

## Wiederherstellung

- Verzeichniss '/opt/iobroker/backups' anlegen
- Kopieren des Backups dort hinein

Backups die mit dem Backup-Adapter erstellt wurden können nachde dem kopieren via Web-Interface wieder eingesielt werden.

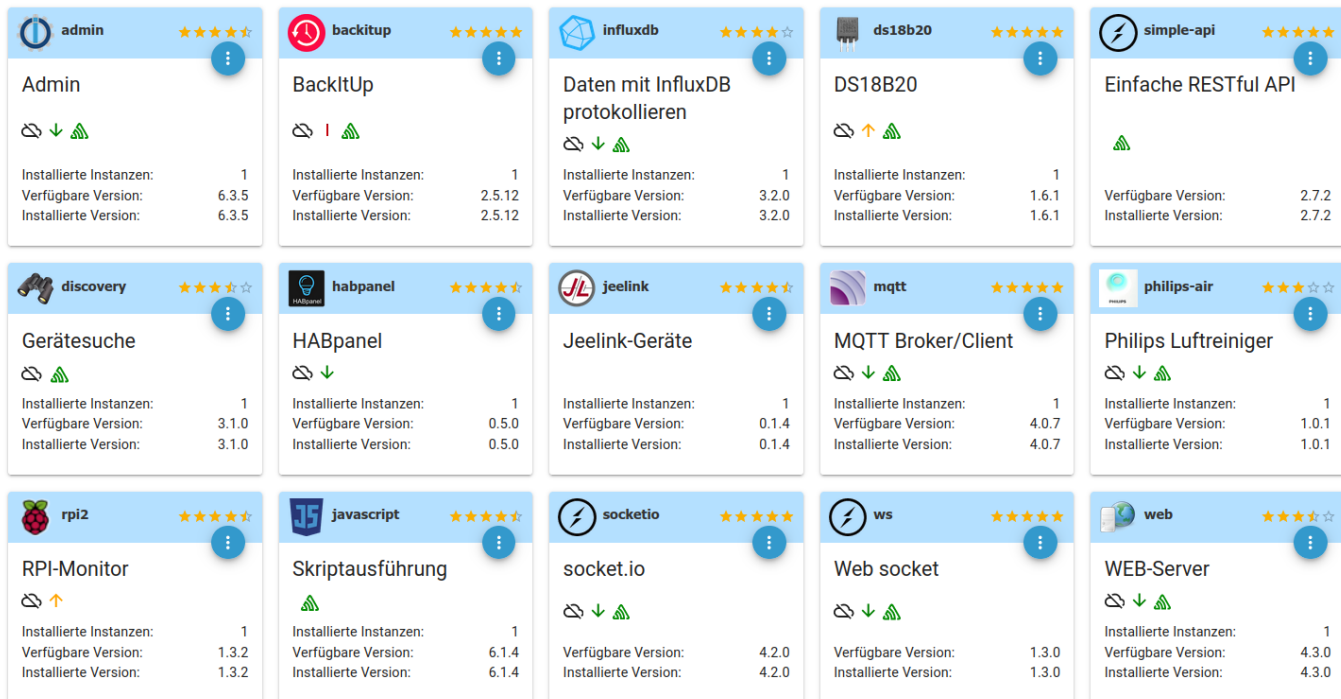
Alternativ kann auch die Konsole verwendet werden:

```
sudo su
cd /opt/iobroker
iobroker stop
iobroker restore 0
iobroker stop
```

## Adapter installieren

Als Adapter werden alle Schnittstellen zu externen aber auch zu internen Datenquellen (z.B. Shelly Sensoren, Temperatur, Luftfeuchte, GPIO, 1-Wire, etc.) und Senken (Shelly Aktoren) bezeichnet.

- influxDB (Datenbank zur Speicherung von Messwerten)
- DS18B20 (Auslesen von 1-Wire Temperatursensoren)
- HABpanel (Steuerung von Aktoren vis Webseite)
- Jeelink-Geräte (Empfangen von 868mHz LaCrosse Temperatur- und Feuchtesensoren (hier z.B. TX29DTH-IT) mit Hilfe eines Jeelink Klones)
- MQTT Broker (zur Datenverarbeitung von MQTT-fähigen Sensoren und Aktoren)
- Philips Luftreiniger (für die Anbindung eines Philips Air Purifier 4000i Series (Typ: AC4236/10)
- RPI-Monitor (Nutzung von GPIOs z.B. zum Einlesen eines Reed-Kontaktes für den Gaszähler)
- Skriptausführung (Javascript und Blockly)
- WEB-Server (für HABpanel)
- Shelly

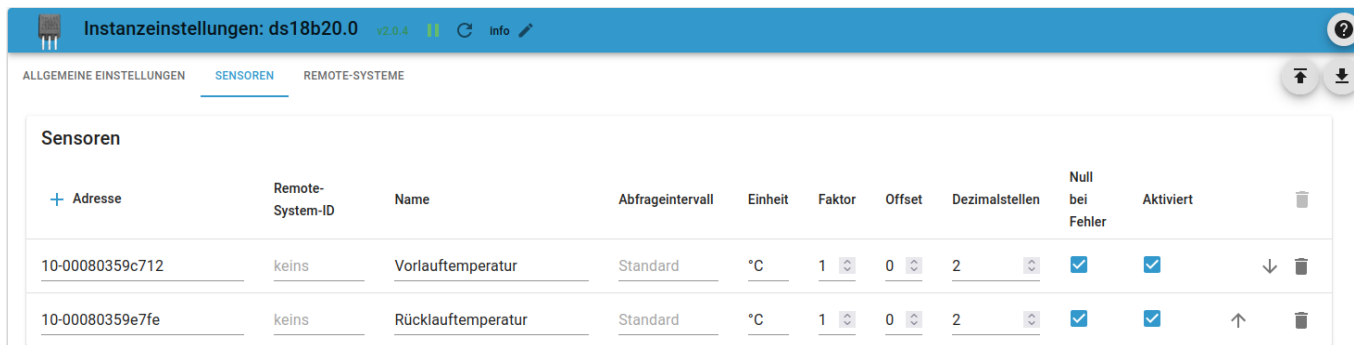


## Adapter konfigurieren

Die oben aufgeführten Adapter sind nach der Installation unter Instanzen zu finden und müssen dort konfiguriert werden.

### 1-Wire

#### DS18B20



### JeeLink

TBC - Empfänger bauen und programmieren → TBC

### Jeelink Settings

/dev/ttyUSB0	57600
Serial port	Baud rate
/dev/ttyUSB0 or /dev/ttyACME0	usually 57600

### Jeelink Command (trial)

Befehl aktivieren  
usually empty

Befehl für Stick-Setup  
usually empty

### Sensorkonfiguration

gültige Sensortypen:

emonTH, emonWater, LaCrosseDTH, LaCrosseDTH, LaCrosseBMP180, HMS100T, LaCrosseWS, EC3000, EMT7110, level



GET FROM ADAPTER

	id	type	uid	Name	Löschen
1	22	LaCrosseDTH	Badezimmer	THS_#03	
2	43	LaCrosseDTH	Küche	THS_#05	
3	21	LaCrosseDTH	Wohnzimmer	THS_#06	
4	11	LaCrosseDTH	Wintergarten	THS_#08	
5	14	LaCrosseDTH	Schlafzimmer	THS_#04	
6	37	LaCrosseDTH	Jonas	THS_#02	
7	40	LaCrosseDTH	IT-Schrank	THS_#09	
8	9	LaCrosseDTH	Lager	THS_#07	
9	8	LaCrosseDTH	Außensensor	THS_#00	

## MQTT

Für IKEA Sensoren -> Die angepasste Firmware gibt es [hier](#).

Instanzeinstellungen: mqtt.0 WARN

VERBINDUNG MQTT EINSTELLUNGEN

IP Server/Broker  WebSockets benutzen

**Verbindungseinstellungen**

IP Adresse [IPv4] 192.168.10.11 - eth0 Port 1883

SSL

**Authentifizierungseinstellungen**

Benutzer mqttuser Passwort ..... Passwort (wiederholen) .....

## Philips

Instanzeinstellungen: philips-air.0 v1.0.3 warn

Geräte-IP  
192.168.10.125

Lebenszeitüberschreitung 30000 ms

Wiederverbindungsintervall 30000 ms

Kommunikationsprotokoll  
CoAP

### Gaszähler

Reedkontakt am GPIO #17 - Name: Gaszähler

Instanzeinstellungen: rpi2.0

GPIOs

Die Eingänge sind hochgezogen

Die Tasten sind hochgezogen

Abfrageintervall für DHTxx / AM23xx-Geräte (ms)

Enable 2 Eingang Etiket

Enable 16 Eingang Etiket

Enable 17 Eingang Gaszähler

Enable 18 Eingang Etiket

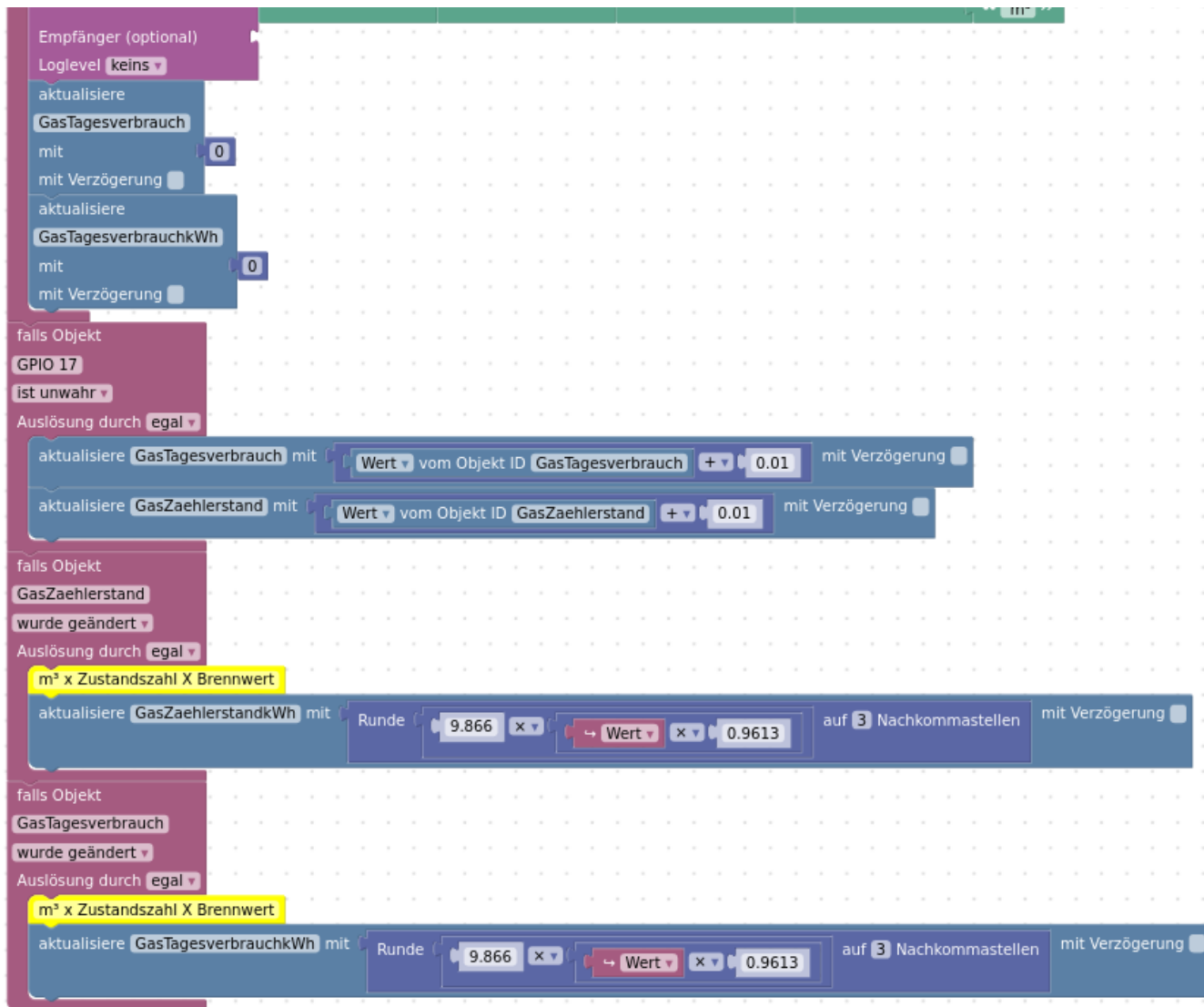
### Blockly

The screenshot displays a Node-RED workspace with several data point creation blocks and a scheduled message block. The data point blocks are:

- Datenpunkt erzeugen** (Object ID: GasZaehlerstand): Init-Wert: 0, Common: `{ "type": "number", "unit": "m³" }`
- Datenpunkt erzeugen** (Object ID: GasZaehlerstandkWh): Init-Wert: 0, Common: `{ "type": "number", "unit": "kWh" }`
- Datenpunkt erzeugen** (Object ID: GasTagesverbrauch): Init-Wert: 0, Common: `{ "type": "number", "unit": "m³" }`
- Datenpunkt erzeugen** (Object ID: GasTagesverbrauchkWh): Init-Wert: 0, Common: `{ "type": "number", "unit": "kWh" }`

The scheduled message block is:

- Zeitplan** (0 0 \*\*\*):
  - signal CMB: signal-cmb.0
  - Meldung: `erstelle Text aus` `" Gas Tagesverbrauch am "`
    - `erstelle Text aus` `Datum/Zeit` `Zeit berechnen basierend auf` `Aktuelle Zeit als Datum-Objekt` `1 Tage` `nach TT.MM.JJJJ`
    - `erstelle Text aus` `" : "`
    - `erstelle Text aus` `Runde` `Wert` `vom Objekt ID GasTagesverbrauch` `auf 3 Nachkommastellen` `" m³ "`
  - Empfänger (optional):
    - Loglevel: keins
    - aktualisiere: GasTagesverbrauch
    - mit: 0



Und das ganze als XML:

+++ Title |

gaszaehler\_blockly.xml

```

<xml xmlns="https://developers.google.com/blockly/xml">
  <block type="create" id="0B{}LlRd,d!Br67@Vl bv" x="113" y="-112">
    <field name="NAME">GasZaehlerstand</field>
    <value name="VALUE">
      <block type="math_number" id="zCMHZ;$=evsZ~g#$$%B,d">
        <field name="NUM">0</field>
      </block>
    </value>
    <value name="COMMON">
      <block type="text" id="+waJXiBe~1dn@SNBXD]b">
        <field name="TEXT">{"type":"number", "unit":"m³"}</field>
      </block>
    </value>
    <next>
      <block type="create" id="2[=]D*fweUy]z]fKRb*N">
        <field name="NAME">GasZaehlerstandkWh</field>

```

```
<value name="VALUE">
  <block type="math_number" id="6#vjQv4JhiY|mZ` tva4+">
    <field name="NUM">0</field>
  </block>
</value>
<value name="COMMON">
  <block type="text" id="lD}p7.V%=!S:e/(Pj1[e">
    <field name="TEXT">{"type":"number", "unit":"kWh"}</field>
  </block>
</value>
<next>
  <block type="create" id="Jt^U$w~,3R~)UPJJP+$c">
    <field name="NAME">GasTagesverbrauch</field>
    <value name="VALUE">
      <block type="math_number" id="ob;_09!^uke_;c@UqtCZ">
        <field name="NUM">0</field>
      </block>
    </value>
    <value name="COMMON">
      <block type="text" id="Br7y=,dGAF9I]mb?z-,:">
        <field name="TEXT">{"type":"number",
"unit":"m³"}</field>
      </block>
    </value>
    <next>
      <block type="create" id="0S(2ltH~c|{]uV)aZEoI">
        <field name="NAME">GasTagesverbrauchkWh</field>
        <value name="VALUE">
          <block type="math_number" id="uL]uOd@Q!FgAK,u/~li0">
            <field name="NUM">0</field>
          </block>
        </value>
        <value name="COMMON">
          <block type="text" id="?PxPe$PT.{E1el.m,Fl{">
            <field name="TEXT">{"type":"number",
"unit":"kWh"}</field>
          </block>
        </value>
        <next>
          <block type="schedule" id="#TX=ZX{-w2cu=Uj!nu0*">
            <field name="SCHEDULE">0 0 * * * </field>
            <statement name="STATEMENT">
              <block type="signal-cmb" id="n4NEdLb^*N-
$c[YJUMw_">
                <field name="INSTANCE">.0</field>
                <field name="LOG"></field>
                <value name="MESSAGE">
                  <shadow type="text"
id="F/ePx6FS0r+[BT|h0L68">
                    <field name="TEXT">text</field>
```

```

        </shadow>
        <block type="text_join"
id="+A!rZ(7aVj!~E{6~WV0m">
        <mutation items="2"></mutation>
        <value name="ADD0">
        <block type="text"
id="8EJ*o[R;:^=5;).KbZeh">
        <field name="TEXT">Gas Tagesverbrauch
am </field>
        </block>
        </value>
        <value name="ADD1">
        <block type="text_join"
id="HeWwloE2zR(^)91A5vLf">
        <mutation items="2"></mutation>
        <value name="ADD0">
        <block type="convert_from_date"
id="s;*kY*B;HuSZ^~w0=Q1B">
        <mutation
xmlns="http://www.w3.org/1999/xhtml" format="false"
language="false"></mutation>
        <field
name="OPTION">DD.MM.YYYY</field>
        <value name="VALUE">
        <block type="time_calculation"
id="YM!lstPQJsLk~Nr|/C9S">
        <field name="OPERATION">-
</field>
        <field name="UNIT">day</field>
        <value name="DATE_TIME">
        <shadow type="time_get"
id="*vxqb!BXG7I/C$m0(,6">
        <mutation
xmlns="http://www.w3.org/1999/xhtml" format="false"
language="false"></mutation>
        <field
name="OPTION">object</field>
        </shadow>
        <block type="time_get"
id="c7c*a4_Wl/:1^bYj[5Gv">
        <mutation
xmlns="http://www.w3.org/1999/xhtml" format="false"
language="false"></mutation>
        <field
name="OPTION">object</field>
        </block>
        </value>
        <value name="VALUE">
        <shadow type="math_number"
id="|4-%[@-^:5+J56T:106m">
        <field name="NUM">1</field>

```

```
        </shadow>
        </value>
      </block>
    </value>
  </block>
</value>
<value name="ADD1">
  <block type="text_join"
id="=%;,#+%QHjmlt3hl!=~r">
    <mutation items="2"></mutation>
    <value name="ADD0">
      <block type="text"
id="3:2kP58oTBRcZi2),~ld">
        <field name="TEXT">: </field>
      </block>
    </value>
    <value name="ADD1">
      <block type="text_join"
id="tmVWY7$h@F7sTbDx8RxC">
        <mutation items="2"></mutation>
        <value name="ADD0">
          <block type="math_rndfixed"
id="r$r$dA.ncKJ|_gq606gB">
            <field name="n">3</field>
            <value name="x">
              <shadow
type="math_number" id="AThWyAlfX]^N:24Bj)1">
                <field
name="NUM">3.1234</field>
              </shadow>
            <block type="get_value"
id="#R/Z*/!V{2!I`w97g5# $">
              <field
name="ATTR">val</field>
              <field
name="OID">javascript.0.GasTagesverbrauch</field>
            </block>
          </value>
        </block>
      </value>
      <value name="ADD1">
        <block type="text"
id="wPYk)Zw6;xd5M2HRI[=?">
          <field name="TEXT">
m³</field>
        </block>
      </value>
    </block>
  </value>
</block>
```

```

        </value>
      </block>
    </value>
  </block>
</value>
<next>
  <block type="update"
id="@0uFnK3p@d(aFNzT|/lb" inline="false">
  <mutation
xmlns="http://www.w3.org/1999/xhtml" delay_input="false"></mutation>
  <field
name="OID">javascript.0.GasTagesverbrauch</field>
  <field name="WITH_DELAY">FALSE</field>
  <value name="VALUE">
    <block type="math_number"
id="4)r,X`Fg.[q=u_H*lfRk">
      <field name="NUM">0</field>
    </block>
  </value>
  <next>
    <block type="update"
id="TI_1t%q+ZcJ4QYR55c_V" inline="false">
      <mutation
xmlns="http://www.w3.org/1999/xhtml" delay_input="false"></mutation>
      <field
name="OID">javascript.0.GasTagesverbrauchkWh</field>
      <field name="WITH_DELAY">FALSE</field>
      <value name="VALUE">
        <block type="math_number"
id="r%v}PcT3aL`0u#bfv}2v">
          <field name="NUM">0</field>
        </block>
      </value>
    </block>
  </next>
</block>
</next>
</block>
</statement>
<next>
  <block type="on" id="4Y-zykZ$Wh;oiRmsNJ5@">
    <field name="OID">rpi2.0.gpio.17.state</field>
    <field name="CONDITION">>false</field>
    <field name="ACK_CONDITION"></field>
    <statement name="STATEMENT">
      <block type="update"
id="9]|sNN!RG]pSo)u[+a:l">
        <mutation
xmlns="http://www.w3.org/1999/xhtml" delay_input="false"></mutation>
        <field
name="OID">javascript.0.GasTagesverbrauch</field>

```

```
<field name="WITH_DELAY">FALSE</field>
<value name="VALUE">
  <block type="math_arithmetic"
id="6}2q8C;`zJ=g7E_fxS}|">
    <field name="OP">ADD</field>
    <value name="A">
      <shadow type="math_number"
id="bh@Wx=0!@N|v#@:zwozA">
        <field name="NUM">1</field>
      </shadow>
    <block type="get_value"
id="kR$.7#of[Q%v[4%` )`qw">
      <field name="ATTR">val</field>
    <field
name="OID">javascript.0.GasTagesverbrauch</field>
    </block>
  </value>
  <value name="B">
    <shadow type="math_number"
id="U_G`SdC1Ek1L0eD^e0GZ">
      <field name="NUM">0.01</field>
    </shadow>
  </value>
</block>
</value>
<next>
  <block type="update"
id="KH(0kBhtIn0cIneAPNH$">
    <mutation
xmlns="http://www.w3.org/1999/xhtml" delay_input="false"></mutation>
    <field
name="OID">javascript.0.GasZaehlerstand</field>
    <field name="WITH_DELAY">FALSE</field>
    <value name="VALUE">
      <block type="math_arithmetic"
id="JllB@rBhaoQ78i!%QiN@">
        <field name="OP">ADD</field>
        <value name="A">
          <shadow type="math_number"
id="bh@Wx=0!@N|v#@:zwozA">
            <field name="NUM">1</field>
          </shadow>
        <block type="get_value"
id=";Rlcv?|LRTX~#Ib;c81n">
          <field name="ATTR">val</field>
        <field
name="OID">javascript.0.GasZaehlerstand</field>
        </block>
      </value>
    <value name="B">
```

```

                                <shadow type="math_number"
id="vl8GbhNo/:JJ~V5.2V5z">
                                <field name="NUM">0.01</field>
                                </shadow>
                                </value>
                                </block>
                                </value>
                                </block>
                                </next>
                                </block>
                                </statement>
                                <next>
                                <block type="on" id="X7m/%;,l,u[1#P61eH}b">
                                <field
name="OID">javascript.0.GasZaehlerstand</field>
                                <field name="CONDITION">ne</field>
                                <field name="ACK_CONDITION"></field>
                                <statement name="STATEMENT">
                                <block type="comment"
id="[Q_/w^nv`)y#;e4ru1nD">
                                <field name="COMMENT">m³ x Zustandszahl
X Brennwert</field>
                                <next>
                                <block type="update"
id="8.z/}1(PYiq*8X7[Q9Ae">
                                <mutation
xmlns="http://www.w3.org/1999/xhtml" delay_input="false"></mutation>
                                <field
name="OID">javascript.0.GasZaehlerstandkWh</field>
                                <field
name="WITH_DELAY">FALSE</field>
                                <value name="VALUE">
                                <block type="math_rndfixed"
id="+0$=HuhMm)nj7_00c56=">
                                <field name="n">3</field>
                                <value name="x">
                                <shadow type="math_number"
id="aeqHXH7yQcf5k2Qn,tC/">
                                <field
name="NUM">3.1234</field>
                                </shadow>
                                <block type="math_arithmetic"
id="(N6Ay,~*P)f+G|I0~!p2">
                                <field
name="OP">MULTIPLY</field>
                                <value name="A">
                                <shadow
type="math_number" id="XwM0.cfS~dYqK@(o/Pc)">
                                <field
name="NUM">9.866</field>
                                </shadow>

```

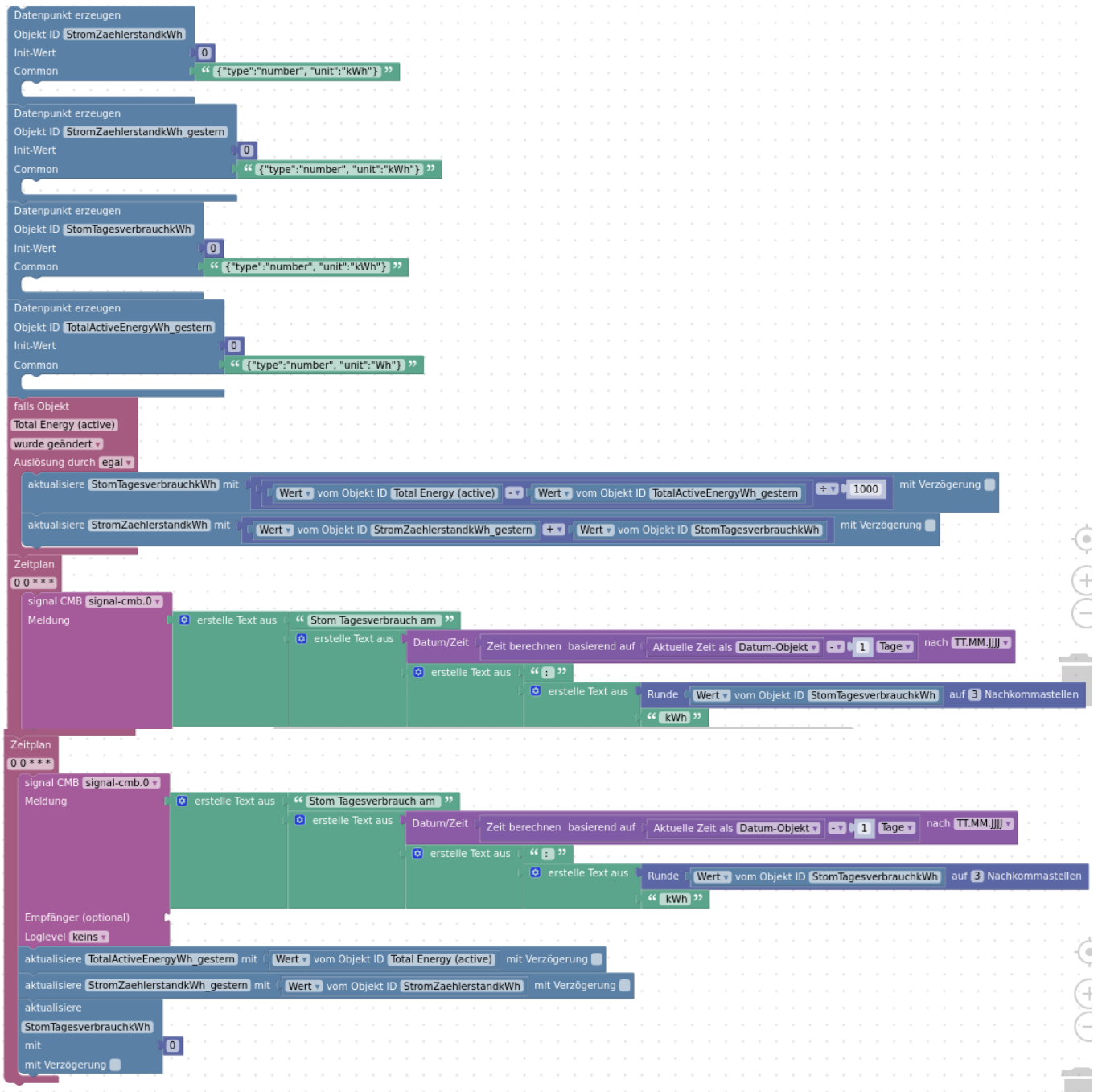
```
        </value>
        <value name="B">
          <shadow
type="math_number" id="}/IuLzLcCeHe!b~b/V0~">
            <field
name="NUM">1</field>
          </shadow>
          <block
type="math_arithmetic" id="7w-+v.aR0eGiRwfMHXNM">
            <field
name="OP">MULTIPLY</field>
            <value name="A">
              <shadow
type="math_number" id="%qWr/Hv}vgETQg]nGDE9">
                <field
name="NUM">1</field>
              </shadow>
            </block>
            <field
type="on_source" id="KxNJKuqKY/]s[I!V$Mol">
name="ATTR">state.val</field>
          </block>
        </value>
        <value name="B">
          <shadow
type="math_number" id="M}_|BoUHL8urPnuw;e9=">
            <field
name="NUM">0.9613</field>
          </shadow>
        </value>
      </block>
    </value>
  </block>
</value>
</block>
</value>
</block>
</value>
</block>
</value>
</block>
</next>
</block>
</statement>
<next>
  <block type="on"
id="1,.5mB=(/f/jzm?Qa)50">
    <field
name="OID">javascript.0.GasTagesverbrauch</field>
    <field name="CONDITION">ne</field>
    <field name="ACK_CONDITION"></field>
    <statement name="STATEMENT">
      <block type="comment" id="-
m![Gh^zQ_@np0AF3~!!">
```

```

Zustandszahl X Brennwert</field>
<field name="COMMENT">m3 x
<next>
  <block type="update"
id="8:U}a~4U+pX]:KTxvyW}">
  <mutation
xmlns="http://www.w3.org/1999/xhtml" delay_input="false"></mutation>
  <field
name="OID">javascript.0.GasTagesverbrauchkWh</field>
  <field
name="WITH_DELAY">FALSE</field>
  <value name="VALUE">
    <block type="math_rndfixed"
id="YcCf+;GbSY/PZ.e(zMeH">
      <field name="n">3</field>
      <value name="x">
        <shadow
type="math_number" id="aeqHXH7yQcf5k2Qn,tC/">
          <field
name="NUM">3.1234</field>
        </shadow>
        <block
type="math_arithmetic" id="%.k-kW,6s)i$)d0kK2[Y">
          <field
name="OP">MULTIPLY</field>
          <value name="A">
            <shadow
type="math_number" id="R^,D.8GKv}Jv!N-k5,?w">
              <field
name="NUM">9.866</field>
            </shadow>
          </value>
          <value name="B">
            <shadow
type="math_number" id="}/IuLzLcCeHe!b~b/V0~">
              <field
name="NUM">1</field>
            </shadow>
          </value>
        </block>
        <field
type="math_arithmetic" id="GZh_TDV2T-Wfkl$v.6%B">
          <field
name="OP">MULTIPLY</field>
          <value name="A">
            <shadow
type="math_number" id="%qWr/Hv}vgETQg]nGDE9">
              <field
name="NUM">1</field>
            </shadow>
          </value>
        </block>
        <field
type="on_source" id="j60tdQ-opx@n@HuS.5;[">

```





Und das ganze als XML:

++++ Title |

strozaehler\_blockly.xml

```

<xml xmlns="https://developers.google.com/blockly/xml">
  <block type="create" id="WNiKV(pYZ3,|L9mDGTHD" x="138" y="-62">
    <field name="NAME">StromZaehlerstandkWh</field>
    <value name="VALUE">
      <block type="math_number" id="0F`c7%Isi~b|@epORR*S">
        <field name="NUM">0</field>
      </block>
    </value>
    <value name="COMMON">

```

```
<block type="text" id="/1(k)0A[2kB~j;PxbH_4">
  <field name="TEXT">{"type":"number", "unit":"kWh"}</field>
</block>
</value>
<next>
<block type="create" id="2[=]D*fweUy]z]fKRb*N">
  <field name="NAME">StromZaehlerstandkWh_gestern</field>
  <value name="VALUE">
    <block type="math_number" id="6#vjQv4JhiY|mZ`tva4+">
      <field name="NUM">0</field>
    </block>
  </value>
  <value name="COMMON">
    <block type="text" id="lD}p7.V%=!S:e/(Pj1[e">
      <field name="TEXT">{"type":"number", "unit":"kWh"}</field>
    </block>
  </value>
  <next>
    <block type="create" id="0S(2ltH~c|{]uV)aZEoI">
      <field name="NAME">StomTagesverbrauchkWh</field>
      <value name="VALUE">
        <block type="math_number" id="uL]u0d@Q!FgAK,u/~1i0">
          <field name="NUM">0</field>
        </block>
      </value>
      <value name="COMMON">
        <block type="text" id="?PxPe$PT.{E1el.m,Fl{">
          <field name="TEXT">{"type":"number",
"unit":"kWh"}</field>
        </block>
      </value>
      <next>
        <block type="create" id="rss(Q.udF1BQD5Bz@T7~">
          <field name="NAME">TotalActiveEnergyWh_gestern</field>
          <value name="VALUE">
            <block type="math_number" id="tx?^zyUsJqm}GHq-b.f3">
              <field name="NUM">0</field>
            </block>
          </value>
          <value name="COMMON">
            <block type="text" id="xDII{fs[B3khS-DSylb8">
              <field name="TEXT">{"type":"number",
"unit":"Wh"}</field>
            </block>
          </value>
          <next>
            <block type="on" id="?c^{.iN$6fj256L#A8Ql">
              <field
name="OID">shelly.0.shellypro3em#c8f09e8314fc#1.EMData0.TotalActiveEner
gy</field>
```

```

    <field name="CONDITION">ne</field>
    <field name="ACK_CONDITION"></field>
    <statement name="STATEMENT">
      <block type="update" id="g+V`|DyKF[]Pmy+=sl;0">
        <mutation xmlns="http://www.w3.org/1999/xhtml"
delay_input="false"></mutation>
        <field
name="OID">javascript.0.StomTagesverbrauchkWh</field>
        <field name="WITH_DELAY">FALSE</field>
        <value name="VALUE">
          <block type="math_arithmetic"
id="11dXVHhW_NGn{g;5pw_+">
            <field name="OP">DIVIDE</field>
            <value name="A">
              <shadow type="math_number" id="v-
*1r6*(074YeD/hDb~_">
                <field name="NUM">1</field>
              </shadow>
            <block type="math_arithmetic"
id="";nKGmG#8.~l5jQA,gp[o">
              <field name="OP">MINUS</field>
              <value name="A">
                <shadow type="math_number"
id="@8B(02U-tIrBZ2qRS*QM">
                  <field name="NUM">1</field>
                </shadow>
              <block type="get_value"
id="]jZ_e/iQou/04%E2EUcM">
                <field name="ATTR">val</field>
              <field
name="OID">shelly.0.shellypro3em#c8f09e8314fc#1.EMData0.TotalActiveEner
gy</field>
                </block>
              </value>
              <value name="B">
                <shadow type="math_number"
id="b6Bt(ksp=pv)Rge1D{;r">
                  <field name="NUM">1</field>
                </shadow>
              <block type="get_value"
id="l+nL:/(/S=]UY|M2-#7M">
                <field name="ATTR">val</field>
              <field
name="OID">javascript.0.TotalActiveEnergyWh_gestern</field>
                </block>
              </value>
              </block>
              </value>
              <value name="B">
                <shadow type="math_number"
id="nkI`PVg;I,we%ojJ,TA*">

```

```
        <field name="NUM">1000</field>
      </shadow>
    </value>
  </block>
</value>
<next>
  <block type="update"
id="SJs~Ys@X?5pv50XP=wqj">
    <mutation
xmlns="http://www.w3.org/1999/xhtml" delay_input="false"></mutation>
    <field
name="OID">javascript.0.StromZaehlerstandkWh</field>
    <field name="WITH_DELAY">FALSE</field>
    <value name="VALUE">
      <block type="math_arithmetic"
id="},ExWVJxj)o(5=vmy1.e">
        <field name="OP">ADD</field>
        <value name="A">
          <shadow type="math_number"
id="@8B(02U-tIrBZ2qRS*QM">
            <field name="NUM">1</field>
          </shadow>
        <block type="get_value"
id="_#ZSu=g6=)eF7:(ey4Bh">
          <field name="ATTR">val</field>
        <field
name="OID">javascript.0.StromZaehlerstandkWh_gestern</field>
      </block>
    </value>
    <value name="B">
      <shadow type="math_number" id="H-
iY+5=={P}IKvpkKUi;">
        <field name="NUM">1</field>
      </shadow>
    <block type="get_value"
id="?DIb~Cgt]yKCn?Eau4?j">
      <field name="ATTR">val</field>
    <field
name="OID">javascript.0.StomTagesverbrauchkWh</field>
  </block>
</value>
</block>
</value>
</block>
</next>
</block>
</statement>
<next>
  <block type="schedule" id="#TX=ZX{-w2cu=Uj!nu0*">
    <field name="SCHEDULE">0 0 * * *</field>
```

```

    <statement name="STATEMENT">
      <block type="signal-cmb" id="n4NEdLb^*N-
$c[YJUMw_ ">
        <field name="INSTANCE">.0</field>
        <field name="LOG"></field>
        <value name="MESSAGE">
          <shadow type="text"
id="F/ePx6FS0r+[BT|h0L68">
            <field name="TEXT">text</field>
            </shadow>
            <block type="text_join"
id="+A!rZ(7aVj!~E{6~WV0m">
              <mutation items="2"></mutation>
              <value name="ADD0">
                <block type="text"
id="8EJ*o[R;:^=5;).KbZeh">
                  <field name="TEXT">Stom
Tagesverbrauch am </field>
                </block>
              </value>
              <value name="ADD1">
                <block type="text_join"
id="HeWwloE2zR[^)91A5vLf">
                  <mutation items="2"></mutation>
                  <value name="ADD0">
                    <block type="convert_from_date"
id="s;*kY*B;HuSZ^~w0=Q1B">
                      <mutation
xmlns="http://www.w3.org/1999/xhtml" format="false"
language="false"></mutation>
                      <field
name="OPTION">DD.MM.YYYY</field>
                      <value name="VALUE">
                        <block
type="time_calculation" id="YM!lstPQJsLk~Nr|/C9S">
                          <field name="OPERATION">-
</field>
                          <field
name="UNIT">day</field>
                          <value name="DATE_TIME">
                            <shadow type="time_get"
id="*vxqb!BXG7I/C$m0(,6">
                              <mutation
xmlns="http://www.w3.org/1999/xhtml" format="false"
language="false"></mutation>
                              <field
name="OPTION">object</field>
                              </shadow>
                              <block type="time_get"
id="c7c*a4_Wl/:1^bYj[5Gv">
                                <mutation

```

```
xmlns="http://www.w3.org/1999/xhtml" format="false"
language="false"></mutation>
                                <field>
name="OPTION">object</field>
                                </block>
                                </value>
                                <value name="VALUE">
                                <shadow>
type="math_number" id="|4-%[0-^:5+J56T:106m">
                                <field>
name="NUM">1</field>
                                </shadow>
                                </value>
                                </block>
                                </value>
                                </block>
                                </value>
                                <value name="ADD1">
                                <block type="text_join"
id="=%;,#+%QHjmlt3hl!=~r">
                                <mutation items="2"></mutation>
                                <value name="ADD0">
                                <block type="text"
id="3:2kp58oTBRcZi2),~ld">
                                <field name="TEXT">:
</field>
                                </block>
                                </value>
                                <value name="ADD1">
                                <block type="text_join"
id="tmVWY7$h@F7sTbDx8RxC">
                                <mutation
items="2"></mutation>
                                <value name="ADD0">
                                <block
type="math_rndfixed" id="r$r$dA.ncKJ|_gg606gB">
                                <field
name="n">3</field>
                                <value name="x">
                                <shadow
type="math_number" id="AThWyAlfX]^N:24Bj)1">
                                <field
name="NUM">3.1234</field>
                                </shadow>
                                </block>
type="get_value" id="#R/Z*/!V{2!I`w97g5#"$>
                                <field
name="ATTR">val</field>
                                <field
name="OID">javascript.0.StomTagesverbrauchkWh</field>
```

```

        </block>
      </value>
    </block>
  </value>
  <value name="ADD1">
    <block type="text"
id="wPYk)Zw6;xd5M2HRI[=?">
      <field name="TEXT">
kWh</field>
      </block>
    </value>
  </block>
</value>
</block>
</value>
</block>
</value>
</block>
</value>
</block>
</value>
</block>
</value>
</block>
<next>
  <block type="update"
id="Ndg}s0%K1?awGpp}{,)">
    <mutation
xmlns="http://www.w3.org/1999/xhtml" delay_input="false"></mutation>
    <field
name="OID">javascript.0.TotalActiveEnergyWh_gestern</field>
    <field name="WITH_DELAY">FALSE</field>
    <value name="VALUE">
      <block type="get_value"
id="8|m`jKyWKA/LP=!E(Xkw">
        <field name="ATTR">val</field>
        <field
name="OID">shelly.0.shellypro3em#c8f09e8314fc#1.EMData0.TotalActiveEner
gy</field>
        </block>
      </value>
    </next>
  </block type="update"
id="05;QEhX_vzA~$gGS^0Q-">
    <mutation
xmlns="http://www.w3.org/1999/xhtml" delay_input="false"></mutation>
    <field
name="OID">javascript.0.StromZaehlerstandkWh_gestern</field>
    <field
name="WITH_DELAY">FALSE</field>
    <value name="VALUE">
      <block type="get_value"
id="Zb6figE|CI],mV=zy!AK">
        <field name="ATTR">val</field>
        <field
name="OID">javascript.0.StromZaehlerstandkWh</field>

```



Instanzeinstellungen: influxdb.0 v3.2.0 warn
?

DB SETTINGS
STANDARDEINSTELLUNGEN
EXPERTENEINSTELLUNGEN

DB-Version  
1.x

---

Protokoll Server Port  
http localhost 8086

---

Benutzer Passwort Passwort (wiederholen)  
admin ..... .....

---

DB Name  
iobroker

---

Request Timeout  
30000 Millisekunden

---

Runden Sie bei der Abfrage die Zahlen auf  
4 Protokollieren Sie den letzten Wert erneut beim Start

---

Schreibaktionen zusammenfassen Schreibintervall  
0 60 Sekunden

---

Wert 0 schreibt Werte direkt

🔍 DIE VERBINDUNG ZUM SERVER TESTEN

🗑️ ALLE DATEN IN DATENBANK LÖSCHEN

## Backup durch Script

v3.10.1
admin

- Übersicht
- Adapter
- Instanzen
- Objekte
- Aufzählungen
- Protokolle
- Benutzer
- Hosts
- Dateien
- Backup
- Skripte

+ - 🗑️ 🔍

📁 common

📄 JS backup\_to\_usb-stick

📄 Gaszaehler

📄 JS BACKUP\_TO\_USB-S...

```

1 // Täglich um 03:00 Uhr Nachts wird das Backup ausgeführt. Anpassbar unter "schedule"
2 var usbstick = "/mnt/usb-stick/backup/"; /*Hier den Pfad zum USB-Stick eintragen*/
3
4 function backup() {
5   exec('iobroker backup',
6     function (error, stdout, stderr) {console.log('stdout: ' +
7       stdout);});
8   setTimeout( function() {
9     exec('mv -v /opt/iobroker/backups/* ' + usbstick,
10      function (error, stdout, stderr) {console.log('stdout: ' +
11        stdout);});
12   }, 180000);
13 }
14 schedule("0 3 * * *", function(obj){
15   backup();
16 });
          
```

```

// Täglich um 03:00 Uhr Nachts wird das Backup ausgeführt. Anpassbar unter
"schedule"
var usbstick = "/mnt/usb-stick/backup/"; /*Hier den Pfad zum USB-Stick
eintragen*/

function backup() {
  exec('iobroker backup',
    function (error, stdout, stderr) {console.log('stdout: ' +
stdout);});
  setTimeout( function() {
    exec('mv -v /opt/iobroker/backups/* ' + usbstick,
      function (error, stdout, stderr) {console.log('stdout: ' +
stdout);});
  }, 180000);
}

schedule("0 3 * * *", function(obj){

```

```
    backup();  
};
```

## Update und Bugfixing

```
iobroker stop  
iobroker update  
iobroker fix  
# oder curl -sL https://iobroker.net/fix.sh | bash -  
iobroker upgrade self  
iobroker start
```

From: <https://www.von-thuelen.de/> - Christophs DokuWiki

Permanent link: [https://www.von-thuelen.de/doku.php/wiki/projekte/iobroker\\_banana\\_pi\\_m2u/uebersicht?rev=1767990836](https://www.von-thuelen.de/doku.php/wiki/projekte/iobroker_banana_pi_m2u/uebersicht?rev=1767990836)

Last update: **2026/01/09 20:33**

