

# Zabbix

## task

- dashboard con conteggi aggregati (e altri grafici interessanti)
- trigger di allarme: \* luce accesa da troppo tempo
- export dati csv con API
- gestire utente non privilegiato su zabbix
- VPN robusta che riparte quando il cloud non è raggiungibile
- gestire il mancato boot della componente zabbix di hass
  - /etc/openvpn/iotaiuto.conf ?
  - come far ripartire la connessione zabbix all'interno di hass ?
- esphome:
  - costruire in power meter con allarme su alexa
  - costruire un citofono con ESP32 CAM

## API

```
#!/bin/sh

# 1. set connection details
url=http://monitor.iotaiuto.it/api_jsonrpc.php
user=xxx
password=xxx

# 2. get authorization token
auth=$(curl -s -X POST \
-H 'Content-Type: application/json-rpc' \
-d " \
{
  \"jsonrpc\": \"2.0\",
  \"method\": \"user.login\",
  \"params\": {
    \"user\": \"$user\",
    \"password\": \"$password\"
  },
  \"id\": 1,
  \"auth\": null
}
" $url | \
jq -r '.result'
)

# 3. show triggers in problem state
curl -s -X POST \
-H 'Content-Type: application/json-rpc' \
```

```

-d " \
{
  \"jsonrpc\": \"2.0\",
  \"method\": \"trigger.get\",
  \"params\": {
    \"output\": \"extend\",
    \"selectHosts\": \"extend\",
    \"filter\": {
      \"value\": 1
    },
    \"sortfield\": \"priority\",
    \"sortorder\": \"DESC\"
  },
  \"auth\": \"$auth\",
  \"id\": 1
}
" $url | \
jq -r '.result'

# 4. logout user
curl -s -X POST \
-H 'Content-Type: application/json-rpc' \
-d " \
{
  \"jsonrpc\": \"2.0\",
  \"method\": \"user.logout\",
  \"params\": [],
  \"id\": 1,
  \"auth\": \"$auth\"
}
" $url
~ ❏ Scaricati ❏
→ ❏# 1. set connection details
url=http://127.0.0.1/api_jsonrpc.php
user=api
password=zabbix

# 2. get authorization token
auth=$(curl -s -X POST \
-H 'Content-Type: application/json-rpc' \
-d " \
{
  \"jsonrpc\": \"2.0\",
  \"method\": \"user.login\",
  \"params\": {
    \"user\": \"$user\",
    \"password\": \"$password\"
  },
  \"id\": 1,
# 1. set connection details
url=http://127.0.0.1/api_jsonrpc.php

```

```
user=api \  
password=zabbix  
)  
# 2. get authorization token  
auth=$(curl -s -X POST \oblem state  
-H 'Content-Type: application/json-rpc' \  
-d " \ 'Content-Type: application/json-rpc' \  
{  
  -d " \  
  \"jsonrpc\": \"2.0\",  
  \"method\": \"user.login\",  
  \"params\": {:  
    \"trigger.get\",  
    \"user\": \"$user\",  
    \"password\": \"$password\",  
  },  
  \"selectHosts\": \"extend\",  
  \"id\": 1,filter\": {  
  \"auth\": null,value\": 1  
}  
  },  
  \" $url | \sortfield\": \"priority\",  
jq -r '.result' order\": \"DESC\"  
) },  
  \"auth\": \"$auth\",  
# 3. show triggers in problem state  
curl -s -X POST \  
" $u-H 'Content-Type: application/json-rpc' \  
  -d " \'.result'  
{  
  \"jsonrpc\": \"2.0\",  
  \"method\": \"trigger.get\",  
  \"params\": {type: application/json-rpc' \  
    \"output\": \"extend\",  
    \"selectHosts\": \"extend\",  
    \"filter\": {0\",  
    \"value\": logout\",  
  },ms\": [],  
  \"sortfield\": \"priority\",  
  \"sortorder\": \"DESC\"  
  },  
  \"auth\": \"$auth\",  
  \"id\": 1  
}  
" $url | \  
  jq -r '.result'  
  
# 4. logout user  
curl -s -X POST \  
  -H 'Content-Type: application/json-rpc' \  
  -d " \  
{  
  \"jsonrpc\": \"2.0\",  
  \"method\": \"user.logout\",  
  \"params\": [],
```

```
    \"id\": 1,  
    \"auth\": \"$auth\"  
  }  
  \" $url
```

```
#!/bin/bash  
  
# 1. set connection details  
url=http://monitor.iotaiuto.it/api_jsonrpc.php  
user=admin  
password=Galileo2018.  
  
# 2. get authorization token  
auth=$(curl -s -X POST \  
-H 'Content-Type: application/json-rpc' \  
-d \" \  
{  
  \"jsonrpc\": \"2.0\",  
  \"method\": \"user.login\",  
  \"params\": {  
    \"user\": \"$user\",  
    \"password\": \"$password\"  
  },  
  \"id\": 1,  
  \"auth\": null  
}  
\" $url | \  
jq -r '.result'  
)  
  
# 3. show triggers in problem state  
curl -s -X POST \  
-H 'Content-Type: application/json-rpc' \  
-d \" \  
{  
  \"jsonrpc\": \"2.0\",  
  \"method\": \"trigger.get\",  
  \"params\": {  
    \"output\": \"extend\",  
    \"selectHosts\": \"extend\",  
    \"filter\": {  
      \"value\": 1  
    },  
    \"sortfield\": \"priority\",  
    \"sortorder\": \"DESC\"  
  },  
  \"auth\": \"$auth\",  
  \"id\": 1  
}  
\" $url | \  
jq -r '.result' > ../flussi/dati.json
```

```
jq -r 'del(.[].hosts) | (map(keys) | add | unique) as $cols | map(. as $row
| $cols | map($row[.])) as $rows | $cols, $rows[] | @csv'
../flussi/dati.json > ../flussi/dati_trigger.csv
jq -r '(map(.hosts[] + {"triggerid": .triggerid} | keys) | add | unique) as
$cols | map(. as $row | $cols | map($row[.])) as $rows | $cols, $rows[] |
@csv' ../flussi/dati.json > ../flussi/dati_host.csv
rm ../flussi/dati.json
cat ../flussi/dati_trigger.csv & ../flussi/dati_host.csv
```

# 4. *logout user*

```
curl -s -X POST \
-H 'Content-Type: application/json-rpc' \
-d " \
{
  \"jsonrpc\": \"2.0\",
  \"method\": \"user.logout\",
  \"params\": [],
  \"id\": 1,
  \"auth\": \"\$auth\"
}
" $url
```

```
class ZabbixThread(threading.Thread):
    """A threaded event handler class."""
    # Rename to TRIES and set to 0
    MAX_TRIES = 3

    def __init__(self, hass, zabbix_sender, event_to_metrics):
        """Initialize the listener."""
        threading.Thread.__init__(self, name="Zabbix")
        self.queue = queue.Queue()
        self.zabbix_sender = zabbix_sender
        self.event_to_metrics = event_to_metrics
        self.write_errors = 0
        self.shutdown = False
        self.float_keys = set()
        self.string_keys = set()

    def setup(self, hass):
        """Set up the thread and start it."""
        hass.bus.listen(EVENT_STATE_CHANGED, self._event_listener)
        hass.bus.listen_once(EVENT_HOMEASSISTANT_STOP, self._shutdown)
        self.start()
        _LOGGER.debug("Started publishing state changes to Zabbix")

    def _shutdown(self, event):
        """Shut down the thread."""
        self.queue.put(None)
        self.join()
```

```
@callback
def _event_listener(self, event):
    """Listen for new messages on the bus and queue them for Zabbix."""
    item = (time.monotonic(), event)
    self.queue.put(item)

def get_metrics(self):
    """Return a batch of events formatted for writing."""
    # Replace MAX_TRIES to TRIES
    queue_seconds = QUEUE_BACKLOG_SECONDS + self.MAX_TRIES * RETRY_DELAY

    count = 0
    metrics = []

    dropped = 0

    with suppress(queue.Empty):
        while len(metrics) < BATCH_BUFFER_SIZE and not self.shutdown:
            timeout = None if count == 0 else BATCH_TIMEOUT
            item = self.queue.get(timeout=timeout)
            count += 1

            if item is None:
                self.shutdown = True
            else:
                timestamp, event = item
                age = time.monotonic() - timestamp

                if age < queue_seconds:
                    event_metrics = self.event_to_metrics(
                        event, self.float_keys, self.string_keys
                    )
                    if event_metrics:
                        metrics += event_metrics
                else:
                    dropped += 1

    if dropped:
        _LOGGER.warning("Catching up, dropped %d old events", dropped)

    return count, metrics

def write_to_zabbix(self, metrics):
    """Write preprocessed events to zabbix, with retry."""
    # while True:
    for retry in range(self.MAX_TRIES + 1):
        try:
            self.zabbix_sender.send(metrics)
            if self.write_errors:
                _LOGGER.error("Resumed, lost %d events",
self.write_errors)
```

```
        self.write_errors = 0

        _LOGGER.debug("Wrote %d metrics", len(metrics))
        # Put [self.TRIES = 0]
        break

    except OSError as err:
        # [time.sleep(RETRY_DELAY)] out of [if retry <
self.MAX_TRIES:]
        if retry < self.MAX_TRIES:
            # Put [self.TRIES += 1]
            time.sleep(RETRY_DELAY)
        else:
            if not self.write_errors:
                _LOGGER.error("Write error: %s", err)
            self.write_errors += len(metrics)
```

From:  
<https://wiki.csgalileo.org/> - Galileo Labs

Permanent link:  
<https://wiki.csgalileo.org/tips/zabbix?rev=1627292183>

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