

TRU custom monitoring

The journey to success

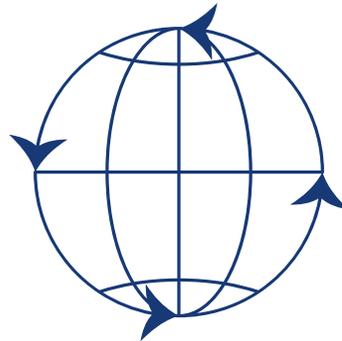


Whoami?

Brian van Baekel



- Zabbix consultant
- Zabbix trainer
- Network engineer



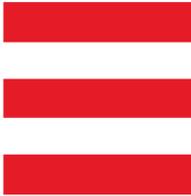
Opensource ICT Solutions

Whoami?

Nathan Liefiting



- Network engineer
- Zabbix management/enthusiast

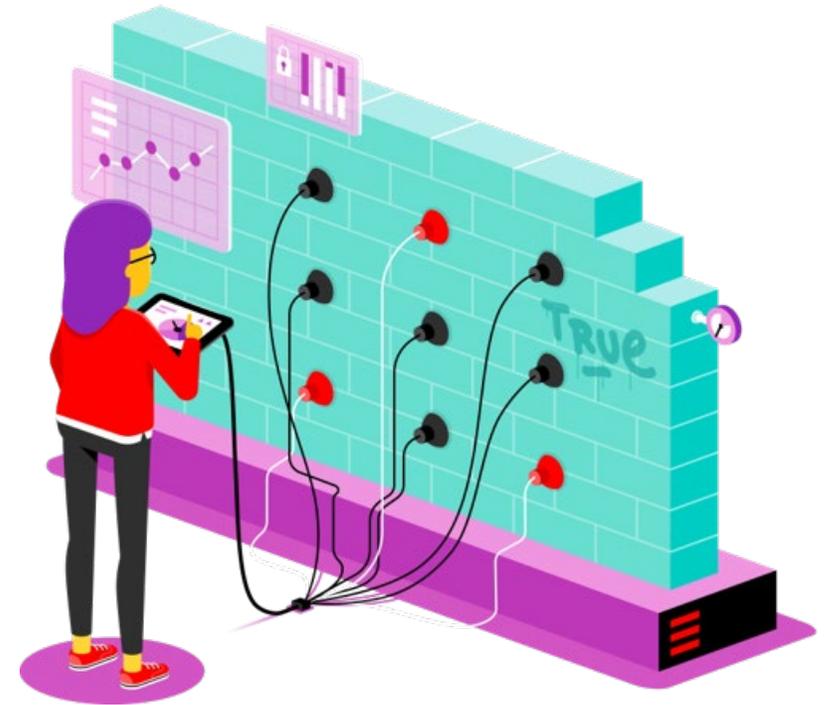
TRUE 

Current situation

- Monitoring



- Servers



- Network

Old situation



Dashboards

:Default



Device-summary-horiz

	Total	Up	Down	Ignored	Disabled
Devices	236	214	9	10	3
Ports	25223	17789	2542	875	2818

Availability-map

Total hosts up: 214 warn: 0 down: 9



Alerts

2019-11-28 08:16:01	Devices up/down less important	pre_transpoc_101		
2019-10-28 15:05:01	Internal eBGP session down	gateway01		
2019-10-15 08:16:01	Memory over limit	gateway01		
2019-10-15 08:16:01	Storage over limit	gateway01		

Current situation

- Dashboard

Dashboards

- Name ▲
- TRUE Core Routers
- TRUE Default dashboard
- TRUE Maps
- TRUE Zabbix server health

ZABBIX Monitoring Inventory Reports Configuration Administration

Dashboard Problems Overview Web Latest data Graphs Screens Maps Discovery Services meeseeks

TRUE Default dashboard

All dashboards / TRUE Default dashboard

Zoom out Last 1 hour

Unacknowledged Problems

Time	Recovery time	Status	Info	Host	Problem • Severity	Duration	Ack	Actions
21:18:23	21:20:23				Yellow Alarm on	2m	No	24

Graph

269.11 GB
268.67 GB
268.22 GB
267.77 GB
267.32 GB
266.87 GB

2-03 20:29 2-03 20:46 2-03 21:02 2-03 21:19

Zabbix server: Free disk space on /

Host availability

	Available	Not available	Unknown	Total
Zabbix agent	5	0	0	5
SNMP	218	5	2	225

Problems

Time	Info	Host	Problem • Severity	Duration	Ack	Actions
2019-10-30 19:13:13		0.3-c01	Yellow Alarm on 0.3-c01	3m 6d 2h	Yes	1 22
2019-10-13 19:34:56			Free disk space is less than 20% on volume /	3m 23d 2h	Yes	1 8

System information

Parameter	Value	Details
Zabbix server is running	Yes	
Number of hosts (enabled/disabled/templates)	346	230 / 5 / 111

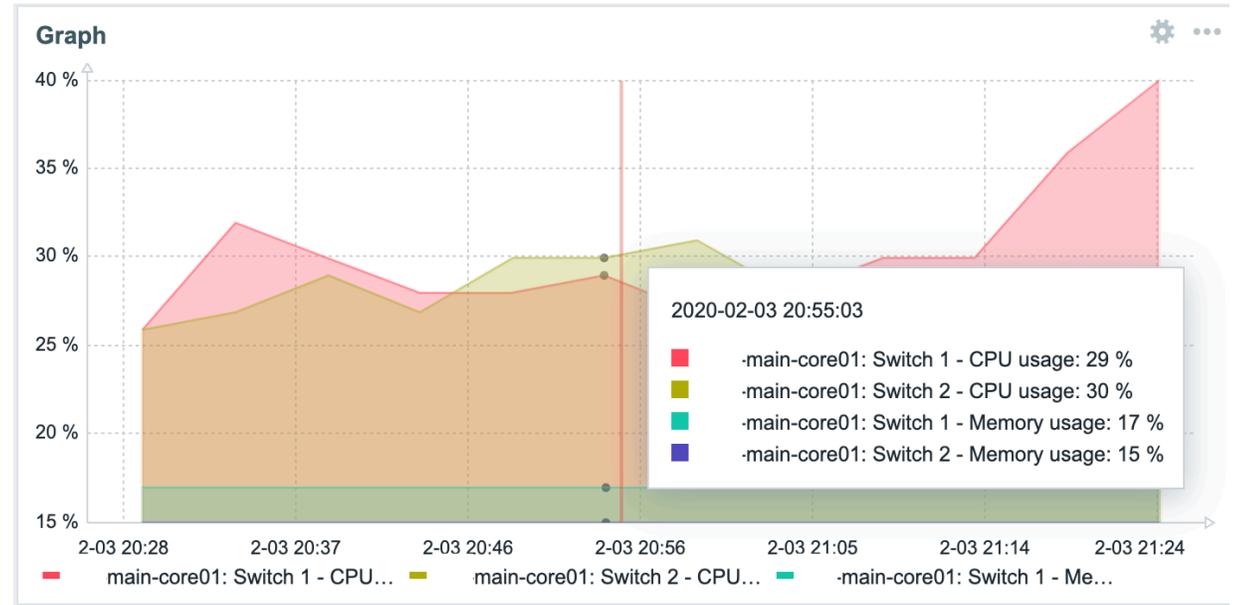
Old situation

- LibreNMS Graphing

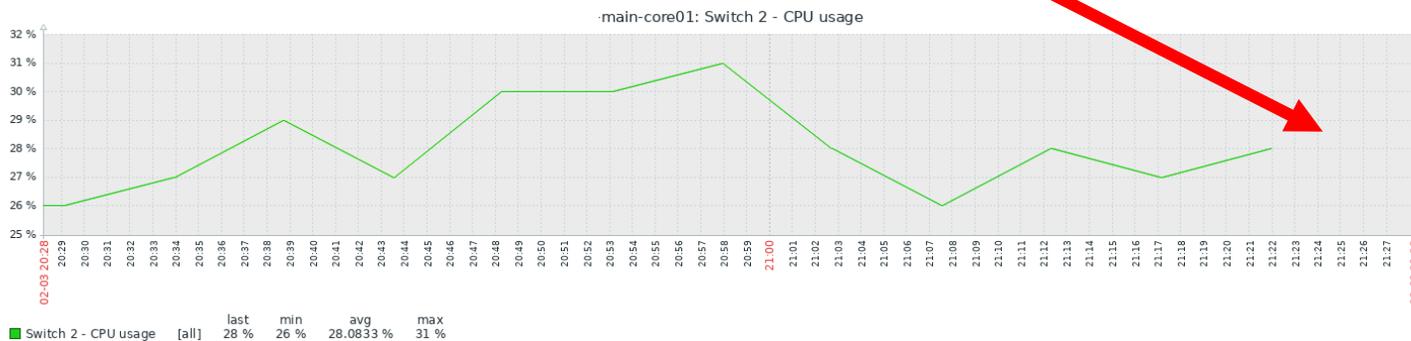


Current situation

- Zabbix Graphing

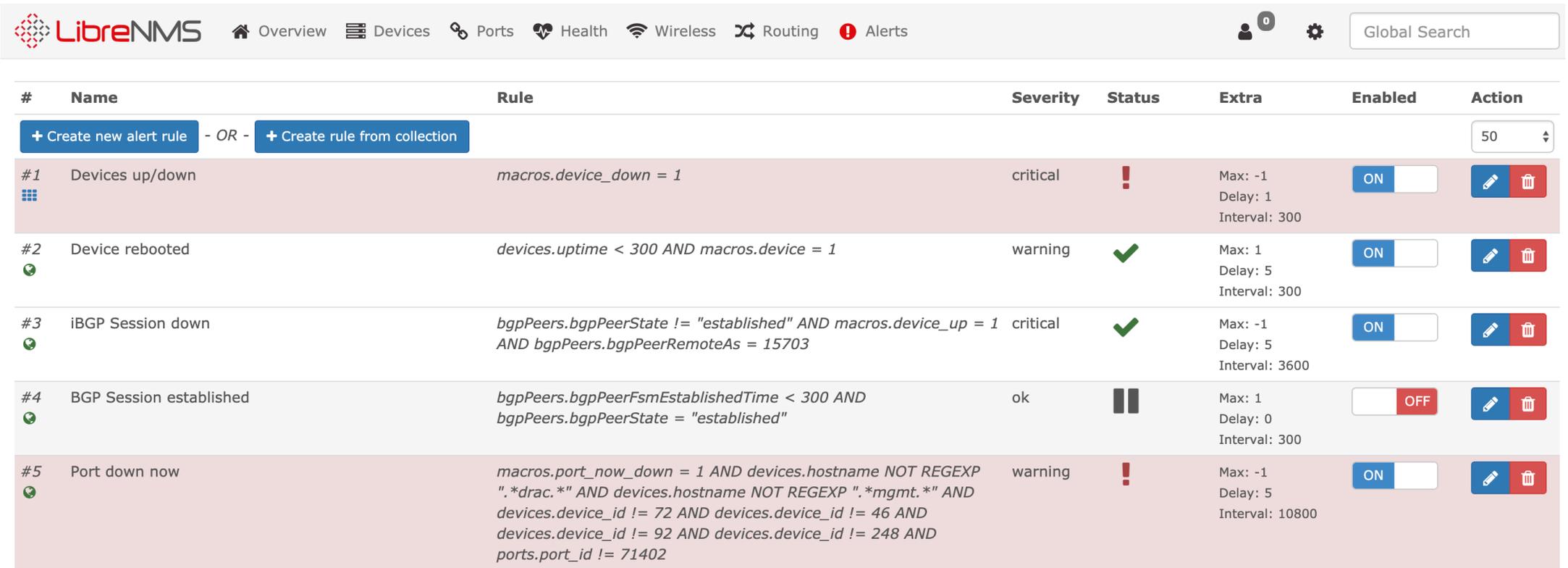


Bug!
(ZBX-1977)



Old situation

- LibreNMS Alerting



The screenshot shows the LibreNMS Alerts page. The top navigation bar includes the LibreNMS logo and menu items: Overview, Devices, Ports, Health, Wireless, Routing, and Alerts. A user profile icon with '0' notifications and a settings gear are on the right, along with a 'Global Search' input field.

#	Name	Rule	Severity	Status	Extra	Enabled	Action
+ Create new alert rule - OR - + Create rule from collection							
#1	Devices up/down	<code>macros.device_down = 1</code>	critical	!	Max: -1 Delay: 1 Interval: 300	ON	
#2	Device rebooted	<code>devices.uptime < 300 AND macros.device = 1</code>	warning	✓	Max: 1 Delay: 5 Interval: 300	ON	
#3	iBGP Session down	<code>bgpPeers.bgpPeerState != "established" AND macros.device_up = 1 AND bgpPeers.bgpPeerRemoteAs = 15703</code>	critical	✓	Max: -1 Delay: 5 Interval: 3600	ON	
#4	BGP Session established	<code>bgpPeers.bgpPeerFsmEstablishedTime < 300 AND bgpPeers.bgpPeerState = "established"</code>	ok		Max: 1 Delay: 0 Interval: 300	OFF	
#5	Port down now	<code>macros.port_now_down = 1 AND devices.hostname NOT REGEXP ".*drac.*" AND devices.hostname NOT REGEXP ".*mgmt.*" AND devices.device_id != 72 AND devices.device_id != 46 AND devices.device_id != 92 AND devices.device_id != 248 AND ports.port_id != 71402</code>	warning	!	Max: -1 Delay: 5 Interval: 10800	ON	

Current situation



Stressing and progressing

Nathan Liefing

larcorba

Edit profile

The Netherlands

Overview **Repositories 7** Projects 0 Packages 0 Stars 1 Followers 0 Following 1

Find a repository...

Type: All

Language: All

New

opsgenie-integration

Forked from opsgenie/opsgenie-integration

Python 40 Apache License 2.0 Updated 3 days ago

Star

Larcorba-Zabbix-templates-Juniper-QFX5200-SNMPv3

★ 1 Updated on 17 Nov 2019

Star

Larcorba-Zabbix-templates-Juniper-QFX5110-SNMPv3

★ 1 Updated on 17 Nov 2019

Star

Larcorba-Zabbix-templates-Fortigate-General-SNMPv3

Updated on 17 Nov 2019

Star

Larcorba-Zabbix-templates-Juniper-EX-SNMPv3

★ 1 Updated on 17 Nov 2019

Star

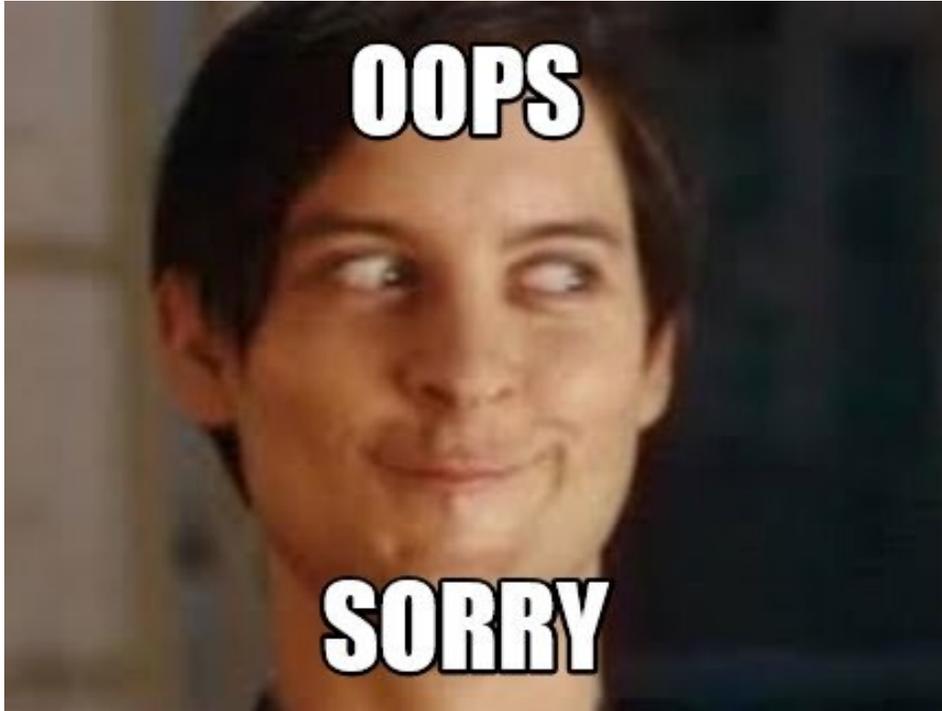
Larcorba-Zabbix-templates-Juniper-MX-SNMPv3

★ 1 Updated on 17 Nov 2019

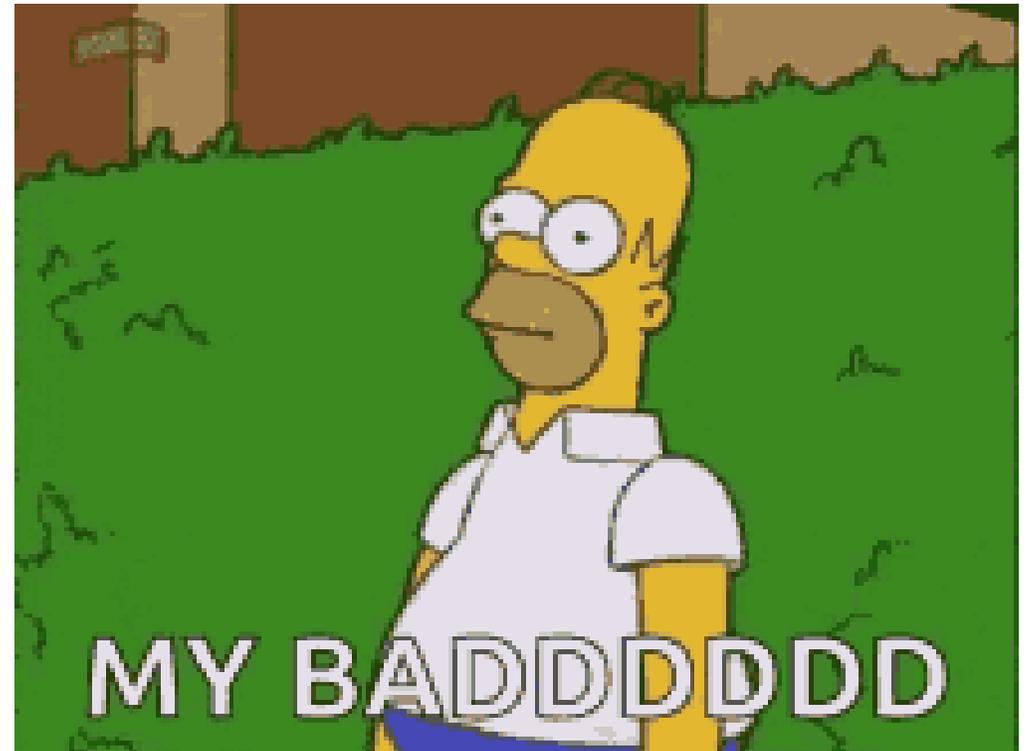
Star

- Zabbix Alerting

Old situation



- Automation



```
import requests
import json

url = "https://meeseeks.true.nl/api_jsonrpc.php"
```

```
def get_api_token(url):

    payload = {
        "jsonrpc": "2.0",
        "method": "user.login",
        "params": {"user": "python-api", "password":
            "id": 1,
            "auth": None
        }

    resp = requests.post(url=url, json=payload )
    out = resp.json()

    return out['result']
```

```
def get_hosts(api_token, url):

    payload = {
        "jsonrpc": "2.0",
        "method": "host.get",
        "params": {
            "output": [
                "hostid",
                "host"
            ],
            "selectInterfaces": [
                "interfaceid",
                "ip",
                "main"
            ]
        },
        "id": 2,
        "auth": api_token
    }

    resp = requests.post(url=url, json=payload )
    out = resp.json()

    return out['result']
```

Current situation

- Automation

- Autofill /etc/hosts file on our jump host 'Unity' using the Zabbix API



Current situation

- Alerting
- Telegram
- Opsgenie



Meeseeks Bot 17:41

PROBLEM ▾

PROBLEM: hybrid-02 1 - CPU usage above 80% (Warning)
Host: hybrid-02
I'm Mr. Meeseeks look at me!



Meeseeks Bot 17:46

OK ▾

OK: hybrid-02 1 - CPU usage above 80% (Warning)
Host: hybrid-02
Ooooh, okay!

Current situation

- OpsGenie why? How?

Zabbix + OpsGenie

All Categories

Notifications & Alerting

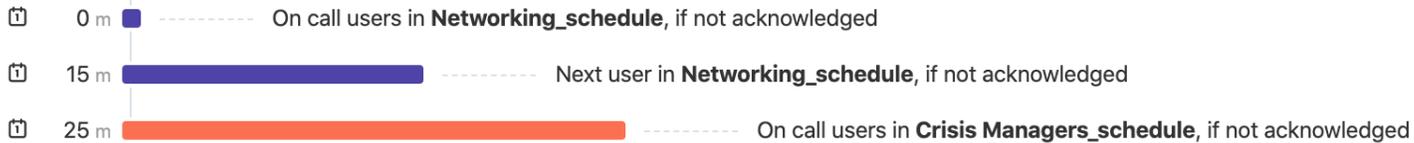
Official Templates

Current situation

- OpsGenie why? How?

Escalation policies

Networking_escalation

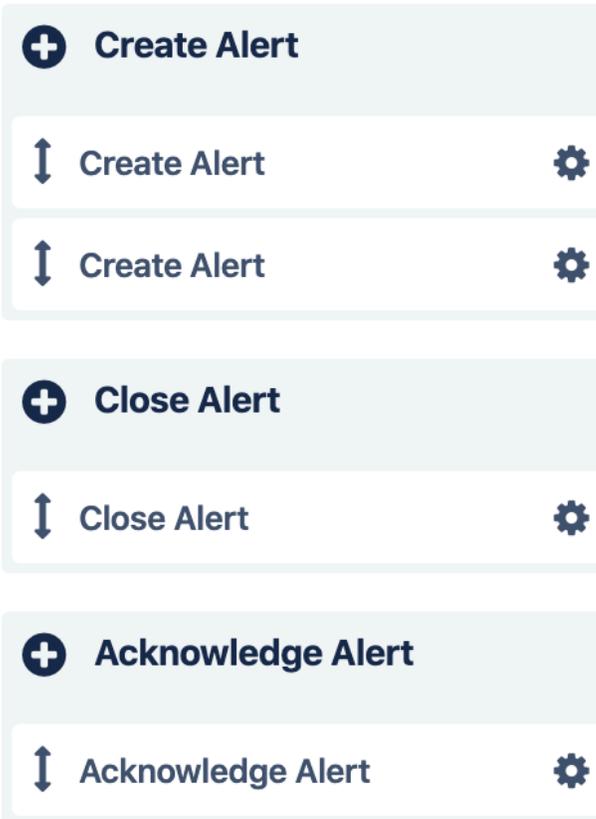


The screenshot shows the OpsGenie Alerts interface. At the top, it displays the time 20:49, signal strength, and battery level at 93%. The main header shows 'Alerts' with a menu icon on the left and a plus sign on the right. Below the header, there are tabs for 'en', 'Critical', 'Unack'd', 'Closed', 'Unseen', and 'All'. The 'All' tab is selected. Three alert cards are visible, all marked as 'CLOSED'. Each card shows a priority of 'P3', a count of 'x1', and the message '[Zabbix] Unavailable by ICMP ping'. The sender is listed as '4d, Nathan Liefting'.

Current situation

- OpsGenie integration caveats

ZABBIX Zabbix (Zabbix)



The screenshot shows the Zabbix configuration interface for alert actions. It is organized into three sections, each with a plus icon and a title:

- Create Alert**: Contains two entries, each with a double-headed vertical arrow icon, the text "Create Alert", and a gear icon for settings.
- Close Alert**: Contains one entry with a double-headed vertical arrow icon, the text "Close Alert", and a gear icon for settings.
- Acknowledge Alert**: Contains one entry with a double-headed vertical arrow icon, the text "Acknowledge Alert", and a gear icon for settings.

 [ZABBIX FEATURE REQUESTS / ZBXNEXT-5586](#)
Opsgenie webhook integration

Current situation

- OpsGenie solution

ZABBIX Zabbix (Zabbix)

Acknowledge Alert

↓ Acknowledge Alert ⚙

Settings >

Filter ▾

Match all conditions below ▾

-- ▾ Equals ▾ Value

Date
Event Id
Host Name
IP Address
Item Key
Item Value
Recipients
Recovery
Event Status
Responders

stName}}

Current situation

ZABBIX Zabbix (Zabbix)

- OpsGenie solution

```
func parseFlags()map[string]string{
    apiKey := flag.String("apiKey", "", "apiKey")

    triggerName := flag.String("triggerName", "", "TRIGGER.NAME")
    triggerId := flag.String("triggerId", "", "TRIGGER.ID")
    triggerStatus := flag.String("triggerStatus", "", "TRIGGER.STATUSEVENT.ACK.STATUS")
    triggerSeverity := flag.String("triggerSeverity", "", "TRIGGER.SEVERITY")
    triggerDescription := flag.String("triggerDescription", "", "TRIGGER.DESCRPTION")
    triggerUrl := flag.String("triggerUrl", "", "TRIGGER.URL")
    triggerValue := flag.String("triggerValue", "", "TRIGGER.VALUE")
    triggerHostGroupName := flag.String("triggerHostGroupName", "", "TRIGGER.HOSTGROUP.NAME")
    hostName := flag.String("hostName", "", "HOSTNAME")
    ipAddress := flag.String("ipAddress", "", "IPADDRESS")
    date := flag.String("date", "", "DATE")
    time := flag.String("time", "", "TIME")
    itemKey := flag.String("itemKey", "", "ITEM.KEY")
    itemValue := flag.String("itemValue", "", "ITEM.VALUE")
    eventId := flag.String("eventId", "", "EVENT.ID")
    recoveryEventStatus := flag.String("recoveryEventStatus", "", "EVENT.RECOVERY.STATUS")
    tags := flag.String("tags", "", "tags")
    responders := flag.String("responders", "", "responders")
    logPath := flag.String("logPath", "", "LOGPATH")
}
```

Settings

Filter

Match all conditions below

Trigger St...	--	Equals	PROBLEMYes
---------------	----	--------	------------

+ Add new condition

Current situation

- OpsGenie solution

Jan 31, 2020 3:06 PM

⚡ alertAction • System

Alert acknowledged via
Zabbix[Zabbix-Acknowledge Alert] with
incomingDataId[5ef52b09-31e3-47a0-baf0-5a56
8ed6dc2e]

2020-
01-31
15:06:53

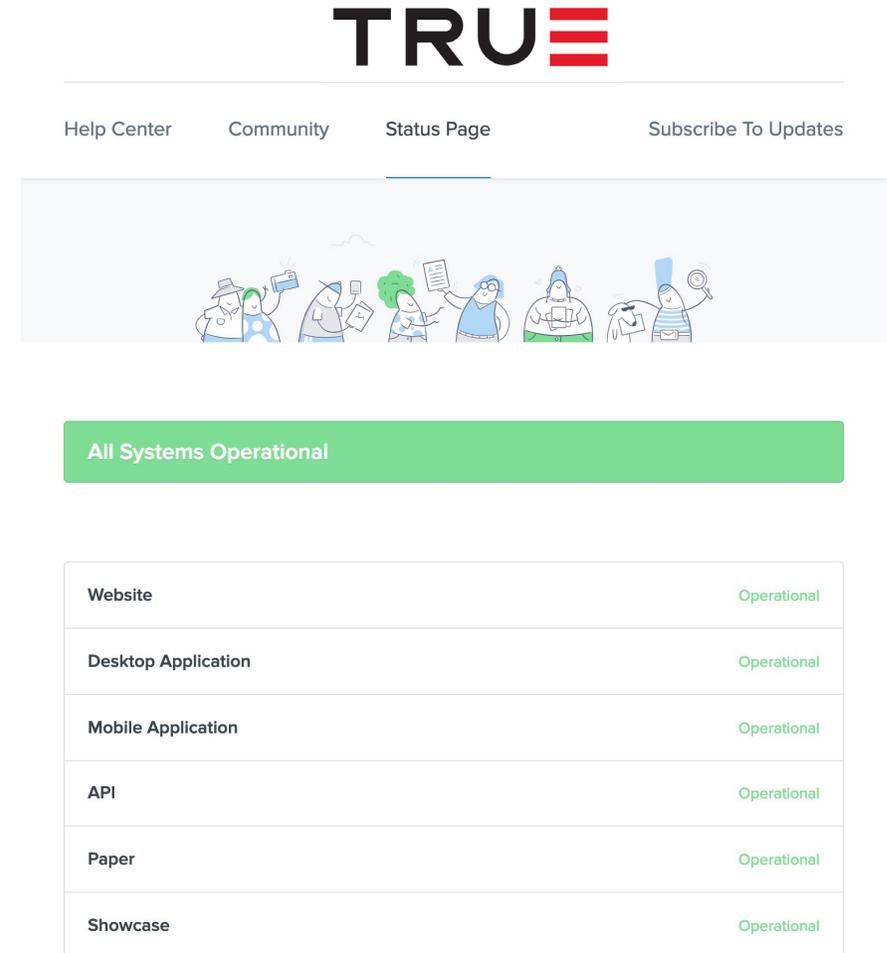
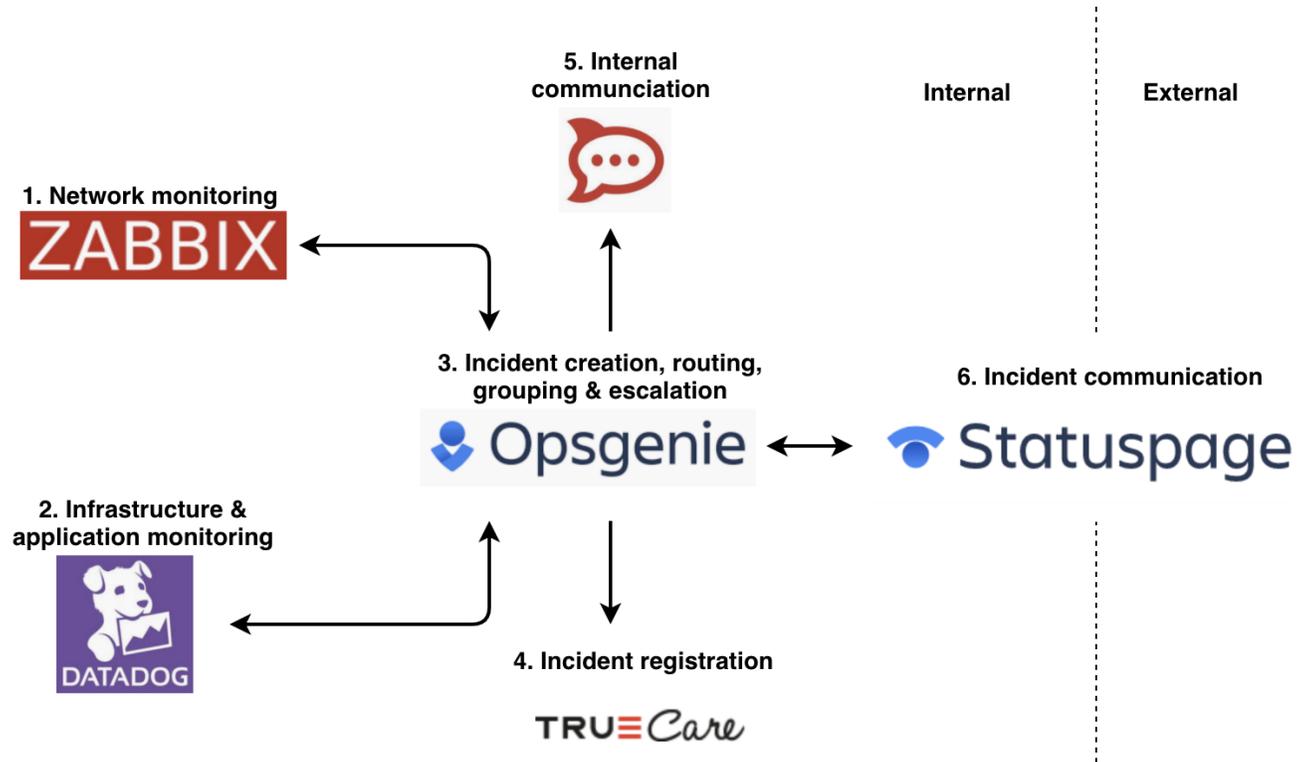
oec (OpsGenie OEC)



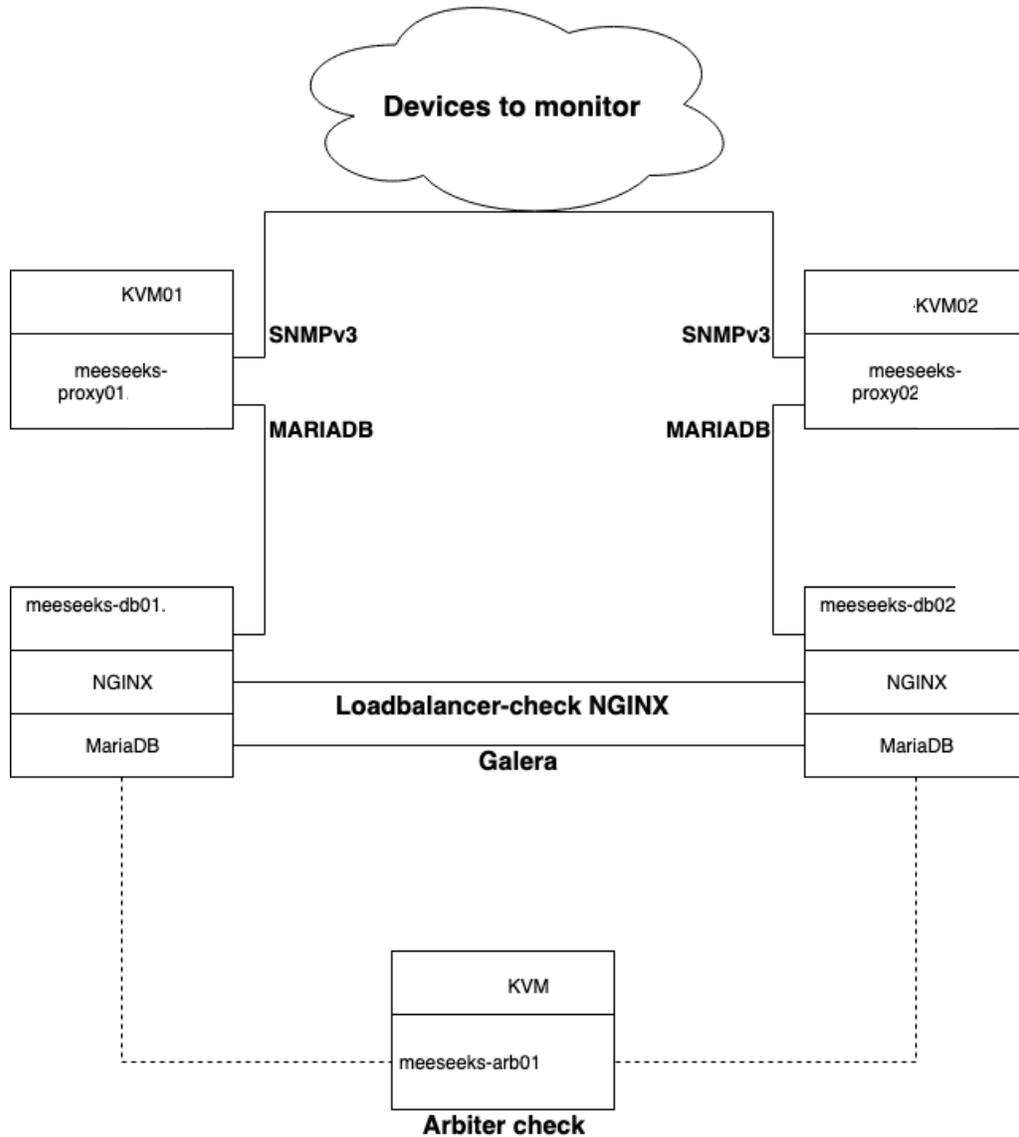
Acknowledged by Zabbix via Opsgenie

Future

- Datadog -> Zabbix (if allowed...)
- Statuspage



Future



- Proxy off-loading
- Redundancy

Thank you

Questions?

