



Opensource ICT Solutions

ZABBIX Germany conference '25

Using Frontend scripts to the Max



Opensource ICT Solutions



Rick van der Ploeg

Zabbix Consultant



Opensource ICT Solutions

Your Zabbix partner in:

- The Netherlands
- Belgium
- United Kingdom
- United States



Opensource ICT Solutions

How to build a front-end script

- No additional requirements
- Create dynamic scripts
- Utilize built-in JavaScript

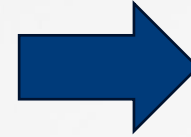


Manual host and trigger actions

Select Script



Execute script



Return result

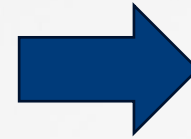


Event generated action operation

Event
generation



Match
conditions



Run operations



Configuration

Scope	Action operation	Manual host action	Manual event action			
Menu path	<sub-menu/sub-menu/...>					
Type	URL	Webhook	Script	SSH	Telnet	IPMI
Execute on	Zabbix agent	Zabbix proxy or server	Zabbix server			
* Commands						

Advanced configuration

Enable user input	☒	
* Input prompt	Enter the domain that you'd like to add	Test user input
Input type	String	Dropdown
Default input string	example.com	
* Input validation rule	^((?!-))(xn--)?[a-z0-9][a-z0-9-_{0,61}[a-z0-9]{0,1}\.(xn--)?([a-z0-9-]{1,61} [a-z0-9-]{1	
Enable confirmation	☐	
Confirmation text		Test confirmation

Update

Clone

Delete

Cancel



Macros

- Dynamic input variables

- Examples:

{MANUALINPUT} : example.com

{\$URL} : https://servicedesk.local

{\$USER} : api_user

{\$PASSWD} : Passwd

{TRIGGER.ID} : 23480

{EVENT.ID} : 223819

{EVENT.TAGS} : class: storage, component: disk, scope: performance,
target: netapp, disk: 1.0.1, node: stor01

Documentation: Supported Macros



Conditions

Action logic

- Simplifies script logic
- Reduces script complexity

Action

Action

Operations 2

* Name

Netapp Disk alert

Type of calculation

And

A and B

Conditions

Label	Name
A	Value of tag <i>component</i> equals <i>disk</i>
B	Template equals <i>NetApp AFF A700 by HTTP</i>

Add

Enabled

☒

New condition

Type

Trigger

Operator

Event name

Trigger source

Trigger

* Triggers

Trigger severity

Host

Host group

Problem is suppressed

Tag name

Tag value

Template

Time period

Select

Add

Cancel

exist.



Operations

Action

Action

Operations 2

* Default operation step duration

1m

Operations

Steps	Details	Start in	Duration	Action
1	Send message to users: servicenow_user via ServiceNow	Immediately	Default	Edit Remove
2	Run script "capture disk details & update case" on current host	00:01:00	Default	Edit Remove
Add				



Enhancing Zabbix with frontend scripts

Manual Actions

- Practical
- Easy to implement
- Improves escalation efficiency

Severity	Info	Host	Problem
1 • Average		Zabbix server	<u>Zabbix agent is not available (for 3m)</u> ?



Enhancing Zabbix with frontend scripts

Severity	Info	Host	Problem
Average		Zabbix server	Zabbix agent is not available (for 3m) ?

SCRIPTS

Backup

OS

Report

Service Ticket

VPN

Zabbix

ged

Acknowledged

By me

Save as

Apply

Reset

Agent

Host Actions

Maintenance

Server

Agent status

Tail Zabbix Agent log



Enhancing Zabbix with frontend scripts

Agent status



Script execution successful.

Output

- `zabbix-agent.service - Zabbix Agent`
Loaded: loaded (/usr/lib/systemd/system/zabbix-agent.service;
disabled; vendor preset: disabled)
Active: inactive (dead)



Execute commands from a network map

Maps

All maps / Very exciting network map



Host-01
OK

- SCRIPTS
- Detect operating system
- Edit repetition
- Ping
- Traceroute

Edit repetition

✓

Script execution successful.

Response

Updated 19 SNMP interfaces to max_repetitions=1 in group 27.

Open log

Ok

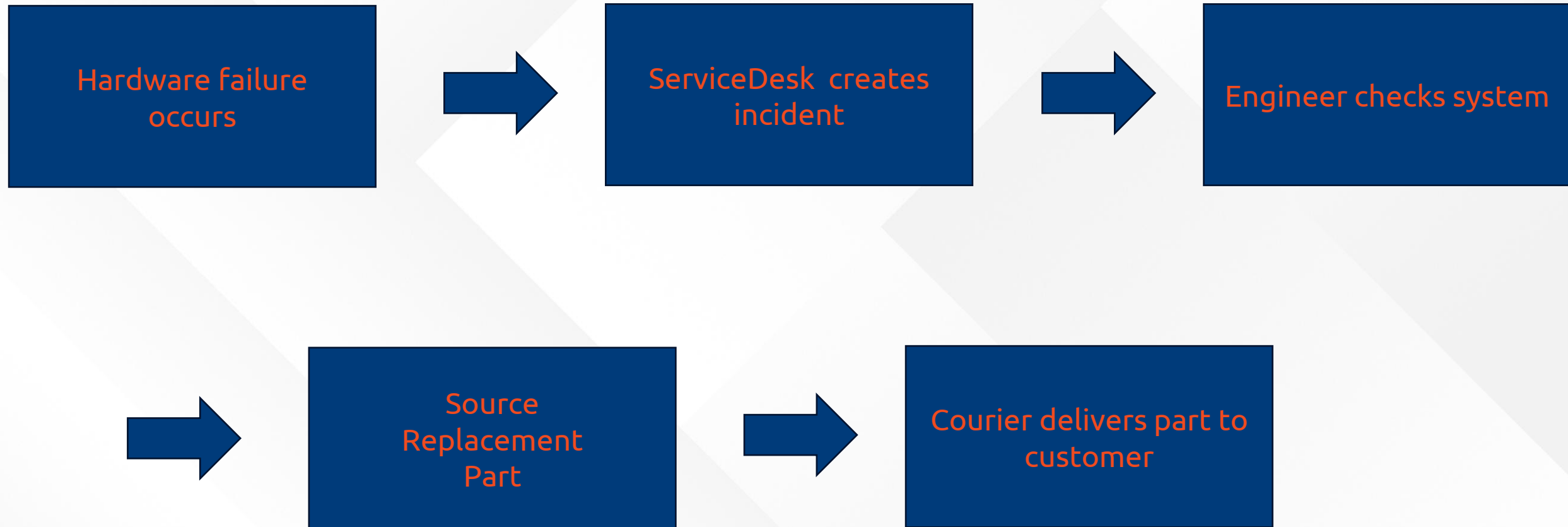
Real-world example

Goal: Optimize replacement of failing hardware

- Optimize duration of Low priority cases
- Escalate High priority cases
- Apply to Hot swappable components (Disks, PSU's, Fans etc.)



Existing process



Creating a trigger action

Implementation

- Dynamic script that handles different components
- Adjusted the default NetApp template
- Defined trigger action

Action

Action

Operations 2

* Name

Netapp Disk alert

Type of calculation

And

▼

A and B

Conditions

Label	Name	Action
A	Value of tag <i>component</i> equals <i>disk</i>	Remove
B	Template equals <i>NetApp AFF A700 by HTTP</i>	Remove
Add		



Creating a trigger action

Implementation

- Configure operations

Action?×

Action

Operations 2

* Default operation step duration

1m

Operations

Steps	Details	Start in	Duration	Action
1	Send message to users: servicenow_user via ServiceNow	Immediately	Default	Edit Remove
2	Run script "capture disk details & update case" on current host	00:01:00	Default	Edit Remove
Add				



Real-world example

Results

- Process Optimization
- Eliminated Manual Steps
- Scalability
- Automation mindset

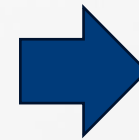
Hardware
failure
occurs



Trigger action



Source
Replacement
Part



Courier delivers part
to customer



Recommendations

General recommendations to get the most out of your scripts

- Keep it simple
- Create your scripts to be dynamic and scalable
- Minimize the amount of actions
- Automate low hanging fruit



Contact



Opensource ICT Solutions B.V.

Tabakvest 87/4490
2000 Antwerpen
Belgium
T. +32 (0)3 377 69 36
E. info@oicts.be
W. <https://oicts.be>

Tappersweg 14-024
2031EV Haarlem
The Netherlands
T. +31 (0) 72 743 65 83
E. info@oicts.nl
W. <https://oicts.nl>

Opensource ICT Solutions LTD

2 Leman Street
London E1W 9US
United Kingdom
T. +44 (0) 20 4551 1827
E. info@oicts.co.uk
W. <https://oicts.co.uk>

Opensource ICT Solutions LLC

251 Little Falls Drive
Wilmington, DE 19808
United States
T. +1 (929) 377 1253
E. info@oicts.com
W. <https://oicts.com>



Opensource ICT Solutions