



SUMMIT  
ONLINE /2020

# "DOING MORE BY DOING LESS - ZABBIX USABILITY IMPROVEMENTS"

Aleksandrs  
Petrovs-Gavrilovs

Technical Support Engineer

ZABBIX, LATVIA

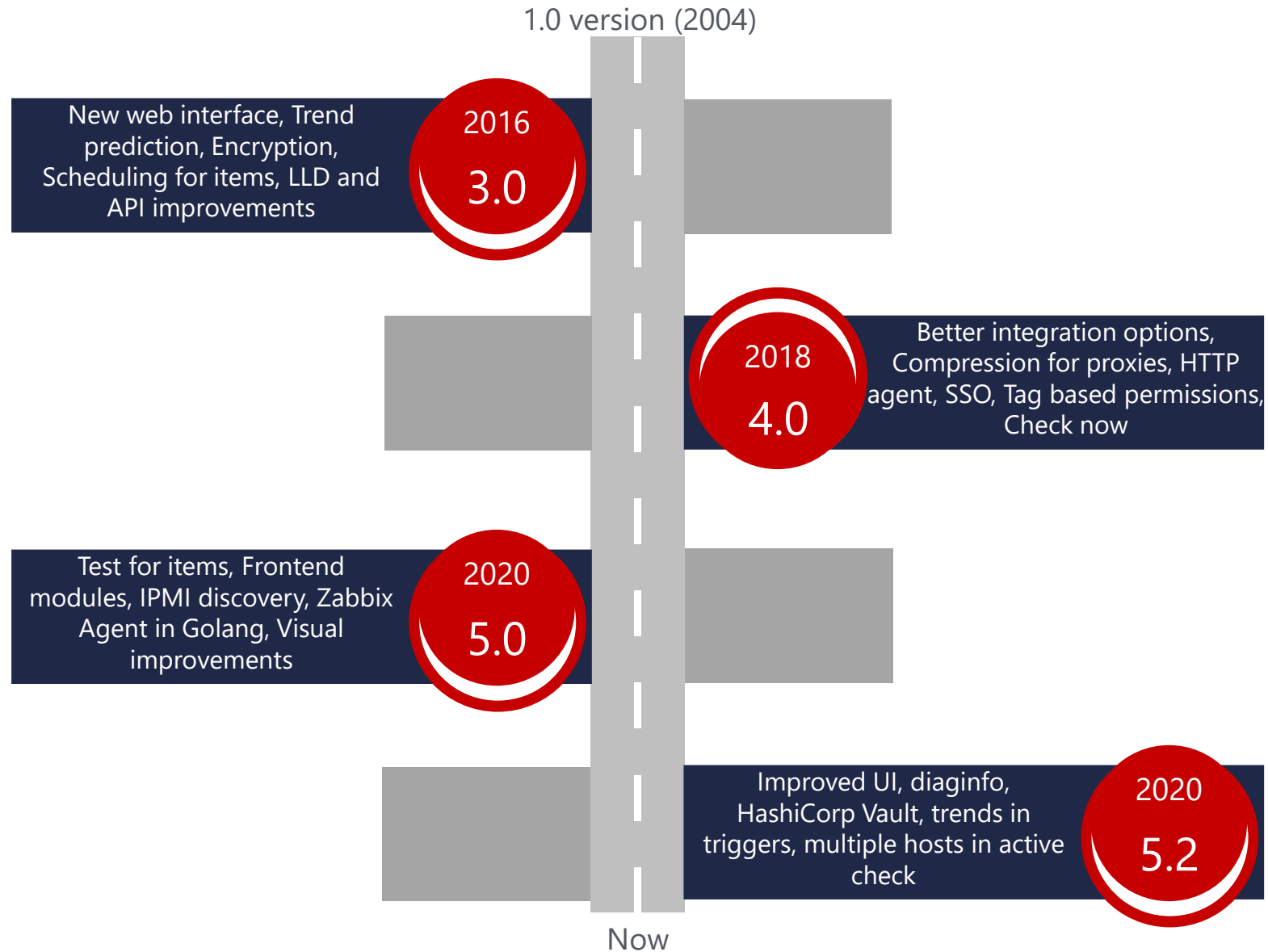


# 01

IMPROVEMENT



# ZABBIX IMPROVEMENTS THROUGH THE YEARS



# ZABBIX RELEASE POLICY



# WHY UPGRADING IS **IMPORTANT?**

- ✓ More stability.
- ✓ More security.
- ✓ Better performance.
- ✓ New features.

**Or in other words - Improvement.**





# 02

FRONTEND USABILITY  
IMPROVED – 5.0

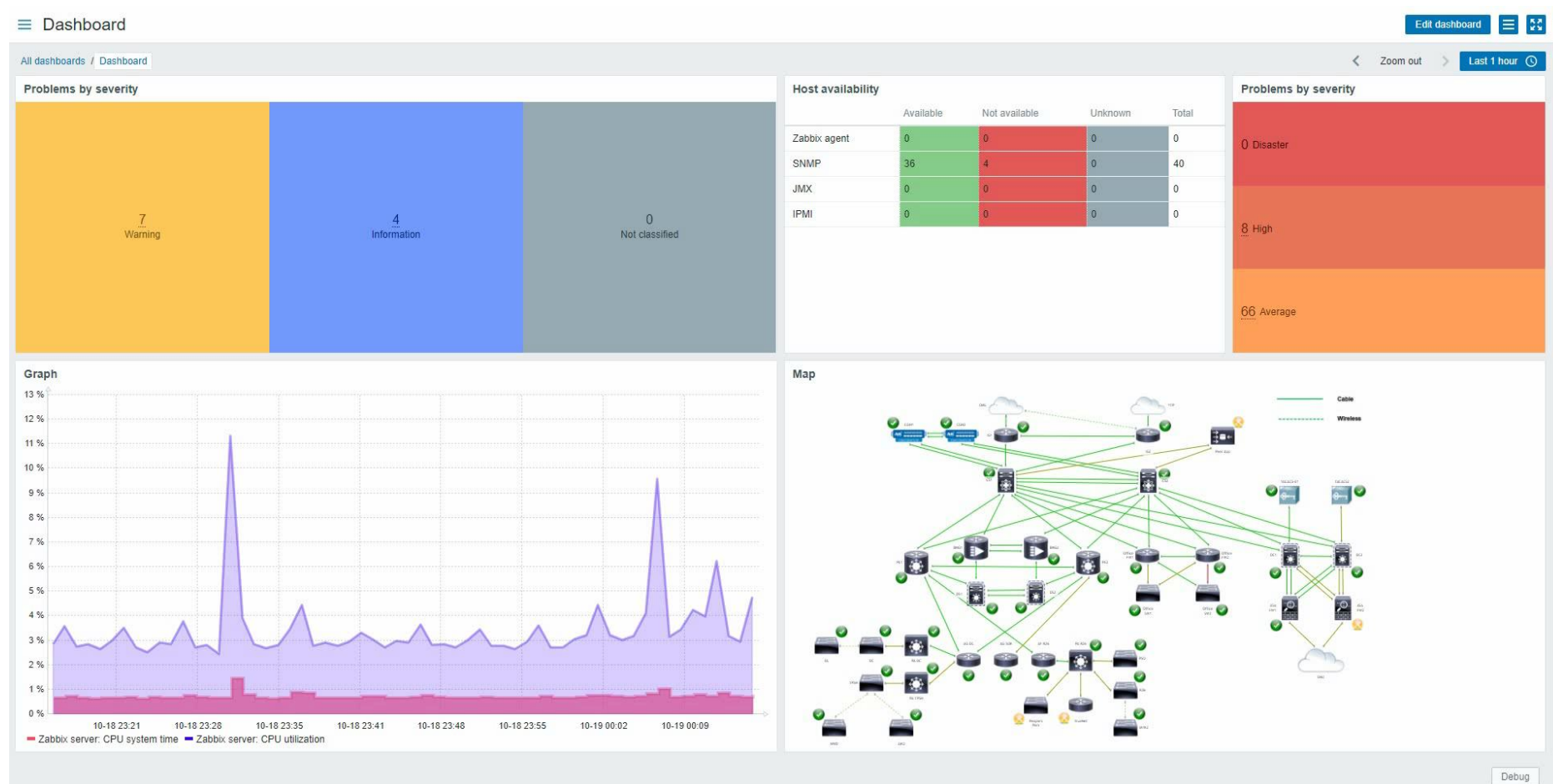


# NAVIGATION REVAMP

✓ Hide the menu completely

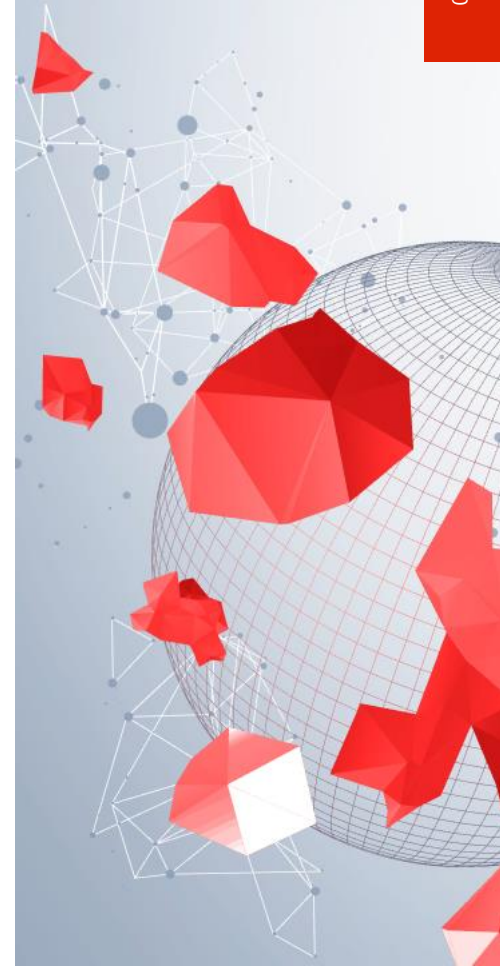
✓ Compact view

✓ Always visible



# A NEW MENU ENTRY **MONITORING→HOSTS**

- ✓ Host name, including maintenance icon and context menu on a click
- ✓ Easy navigation to monitoring data
- ✓ First main interface
- ✓ Availability information
- ✓ List of unresolved tags including tags inherited from templates
- ✓ Colorised number of problems by severity
- ✓ Information about host status (enabled or disabled)





# A NEW MENU ENTRY **MONITORING**→**HOSTS**



# SNMP AUTHENTICATION ON **HOST INTERFACE LEVEL**

- ✓ SNMP authentication attributes are now moved to host interface level
- ✓ All existing SNMP types (SNMPv1, SNMPv2 and SNMPv3) now are a single type "SNMP Agent"
- ✓ All existing macros supported in the SNMP attributes will continue to be supported
- ✓ Network discovery creates SNMP interfaces with SNMP attributes inherited from discovery check



# SNMP AUTHENTICATION ON **HOST INTERFACE LEVEL**

## Hosts

[Host](#) [Templates](#) [IPMI](#) [Tags](#) [Macros](#) [Inventory](#) [Encryption](#)

\* Host name

Network device

Visible name

Network device

\* Groups

Network

type here to search

Select

Interfaces

No interfaces are defined.

[Add](#)

Description

Monitored by proxy

(no proxy)

Enabled

☒

Add

Cancel

# TEST ITEMS FROM THE UI

- ✓ Testing of passive items is now available from the UI
  - Zabbix agent, SNMP, Internal, Aggregate, Simple check, External check, Database monitor, HTTP Agent, IPMI, SSH, Telnet, JMX, Calculated
- ✓ For host: proxy, host IP/DNS -automatically selected (yet editable)
- ✓ For template: select proxy, host IP/DNS name and port number
- ✓ Result of the test or the error message in case of any errors will be displayed
- ✓ Steps of the value processing is clearly seen



# TEST ITEMS FROM THE UI

Item storage period:  Exchange period:

Show value:  [show value mappings](#)

New application:

Applications:

- Interface enp0s3
- Inventory
- Memory
- Monitoring agent
- Network interfaces
- Security
- Status
- Storage
- Zabbix raw items
- Zabbix server

Populates host inventory field:

Description:

Enabled: ☒



# MASK USER MACROS

## Hosts

All hosts / Zabbix server Enabled ZBX SNMP JMX IPMI Applications 17 Items 129 Triggers 67 Graphs 25 Discovery rules 3 Web scenarios

Host Templates 2 IPMI Tags Macros 1 Inventory Encryption

Host macrosInherited and host macros

Macro

Value

Description

{\${SPECIFIC.URL}}

https://www.zabbix.com/events/zabbix\_summit\_2020

T

description

Remove

Add

UpdateCloneFull cloneDeleteCancel

# MASK USER MACROS

- ☑ Three ways to keep the macro value:
  - Text: text macro, same behaviour as it is now (default)
  - Secret: macro contains sensitive information. Macro values will be masked by "\*\*\*\*\*" everywhere in Zabbix UI and alert messages.
  - Vault secret – keep macros in an external vault. (5.2)



# LLD OVERRIDES

Discovery rule

Preprocessing

LLD macros

Filters 4

Overrides

\* Name

Mounted filesystem discovery

Type

Zabbix agent

\* Key

vfs.fs.discovery

\* Update interval

1h

Custom intervals

Type	Interval	Period	Action
<div>Flexible</div> <div>Scheduling</div>	50s	1-7,00:00-24:00	<a href="#">Remove</a>
<a href="#">Add</a>			

\* Keep lost resources period

30d

Description

Discovery of file systems of different types.

Enabled

☒

Update

Clone

Test

Delete

Cancel

# LLD OVERRIDES

- ✓ Decide what objects in LLD will be created and how
- ✓ Override will be applied to all filter matching LLD objects.
- ✓ Zabbix Server must process overrides one by one respecting sort order
- ✓ Condition: apply override to objects matching condition
  - Object: "Item prototype", "Trigger prototype", "Graph prototype" or "Host prototype"
  - Operator: "matches", "does not match", "contains", "does not contain", "equals" or "does not equal"
  - Pattern to match item, trigger, graph or host prototype name depending on selected object. Result of the test or the error message in case of any errors will be displayed



# LLD OVERRIDES

- ☑ Actions: list of override actions, list of available actions depends on object used in condition
  - Item related: "Create", "Do not create", "Create enabled", "Create disabled", "Update interval", "History storage period", "Trend storage period"
  - Trigger related: "Create", "Do not create", "Severity", "Create enabled", "Create disabled", "Add tag"
  - Graph related: "Create", "Do not create"
  - Host related: "Create", "Do not create", "Create enabled", "Create disabled", "Link new template", "Host inventory"





# SUPPORT OF **USER MACROS** FOR HOST PROTOTYPES

- ✓ Host prototype macros: will display list of user macros of this host prototype
- ✓ Inherited and prototype macros: will display global, template, host and host prototype macros

## Host prototypes

All hosts / Zabbix server Enabled ZBX SNMP JMX IPMI Discovery list / Network interface discovery Item prototypes 8 Trigger prototypes 3 Graph prototypes 1 Host prototypes

[Host](#) [Groups](#) [Templates](#) [IPMI](#) [Tags](#) [Macros 2](#) [Inventory](#) [Encryption](#)

[Host prototype macros](#) [Inherited and host prototype macros](#)

Macro	Value		Description	
<input type="text" value="{USERNAME}"/>	<input type="text" value="root"/>	<div>T</div>	<input type="text" value="description"/>	<a href="#">Remove</a>
<input type="text" value="{PASSWORD}"/>	<input type="text" value="....."/>	<div>👁</div>	<input type="text" value="description"/>	<a href="#">Remove</a>

[Add](#)

# FILTER FOR DISCOVERY RULES

Host groups

type here to search

Select

Hosts

Networking device for presentation ✕  
type here to search

Select

Name

Key

Type

all

▼

State

all

▼

Update interval

Status

all

▼

Keep lost resources period

Apply

Reset

<input type="checkbox"/>	Host	Name ▲	Items	Triggers	Graphs	Hosts	Key	Interval	Type	Status	Info
<input type="checkbox"/>	Networking device for presentation	<a href="#">Template Module Cisco CISCO-PROCESS-MIB SNMPv2: CPU Discovery</a>	Item prototypes 1	Trigger prototypes 1	Graph prototypes 1	Host prototypes	cpu.discovery	1h	SNMP agent	Enabled	
<input type="checkbox"/>	Networking device for presentation	<a href="#">Template Module Cisco Inventory SNMPv2: Entity Serial Numbers Discovery</a>	Item prototypes 1	Trigger prototypes 1	Graph prototypes	Host prototypes	entity_sn.discovery	1h	SNMP agent	Enabled	
<input type="checkbox"/>	Networking device for presentation	<a href="#">Template Module EtherLike-MIB SNMPv2: EtherLike-MIB Discovery</a>	Item prototypes 1	Trigger prototypes 1	Graph prototypes	Host prototypes	net.if.duplex.discovery	1h	SNMP agent	Enabled	
<input type="checkbox"/>	Networking device for presentation	<a href="#">Template Module Cisco CISCO-ENVMON-MIB SNMPv2: FAN Discovery</a>	Item prototypes 1	Trigger prototypes 2	Graph prototypes	Host prototypes	fan.discovery	1h	SNMP agent	Enabled	
<input type="checkbox"/>	Networking device for presentation	<a href="#">Template Module Cisco CISCO-MEMORY-POOL-MIB SNMPv2: Memory Discovery</a>	Item prototypes 3	Trigger prototypes 1	Graph prototypes 1	Host prototypes	memory.discovery	1h	SNMP agent	Enabled	
<input type="checkbox"/>	Networking device for presentation	<a href="#">Template Module Interfaces SNMPv2: Network Interfaces Discovery</a>	Item prototypes 9	Trigger prototypes 4	Graph prototypes 1	Host prototypes	net.if.discovery	1h	SNMP agent	Enabled	
<input type="checkbox"/>	Networking device for presentation	<a href="#">Template Module Cisco CISCO-ENVMON-MIB SNMPv2: PSU Discovery</a>	Item prototypes 1	Trigger prototypes 2	Graph prototypes	Host prototypes	psu.discovery	1h	SNMP agent	Enabled	
<input type="checkbox"/>	Networking device for presentation	<a href="#">Template Module Cisco CISCO-ENVMON-MIB SNMPv2: Temperature Discovery</a>	Item prototypes 2	Trigger prototypes 3	Graph prototypes	Host prototypes	temperature.discovery	1h	SNMP agent	Enabled	

Displaying 8 of 8 found

# CLONE/COPY WIDGETS

Global view

Edit dashboard



All dashboards / Global view

## System information

Parameter	Value	Details
Zabbix server is running	Yes	localhost:10051
Number of hosts (enabled/disabled)	49	48 / 1
Number of templates	210	
Number of items (enabled/disabled/not supported)	1351	1261 / 14 / 76
Number of triggers (enabled/disabled [problem/ok])	660	528 / 132 [38 / 490]
Number of users (online)	2	1



## Problems



Time ▼	Info	Host	Problem • Severity	Duration	Ack	Actions	Tags
2020-10-19 19:33:12	•	Apache Node1	Apache: Failed to fetch status page (or no data for 30m)	1d 16h 24m	No		Service: Zabbix Type: Web Engine
2020-10-19 19:33:11	•	Apache Node1	Apache: Failed to fetch status page (or no data for 30m)	1d 16h 24m	No		Service: Zabbix Type: Web Engine

## Favourite maps

No maps added.

# CLONE/COPY **WIDGETS**

- ✓ Copy widget on both view and edit modes.
- ✓ Copy widget even with read only permissions to dashboard.
- ✓ Paste widget on first available space or on selected area.
- ✓ Replace existing widget with previously copied widget.
- ✓ Widget dimensions are also copied.



# UNACKNOWLEDGE EVENTS

- ✓ Unacknowledged problems can be acknowledged and vice versa

Problem

Severity ☐ Not classified ☒ Warning ☐ High  
☐ Information ☐ Average ☐ Disaster

Age less than ☐ 14 days

Tag display priority

Show operational data

Show suppressed problems ☐ Show unacknowledged only ☐

Compact view ☐ Show timeline ☐

Show details ☐ Highlight whole row ☐

Time ▼	<input type="checkbox"/> Severity	Recovery time	Status	Info	Host	Problem	Duration	Ack	Actions	Tags
11:00:06	<input type="checkbox"/> Warning		PROBLEM		net.mikrotik.450g	↓ Device: Temperature is above warning threshold: >50 ?	1h 4m 9s	No		
020-10-20 22:32:29	<input type="checkbox"/> Warning		PROBLEM		Oracle Database 02 (11g Express)	↓ /: Running out of free inodes (free < 20%) ?	13h 31m 46s	No		
020-10-17 04:03:55	<input type="checkbox"/> Warning		PROBLEM		Networking device for presentation	↓ High ICMP ping response time	4d 8h	No		
020-10-08 13:38:02	<input type="checkbox"/> Warning		PROBLEM		Oracle Database 01 (11g Express)	↓ /: Disk space is low (used > 80%) ?	12d 22h 26m	No		
020-10-01 11:40:16	<input type="checkbox"/> Warning		PROBLEM		Network device	↓ ↑ No SNMP data collection ?	20d 23m	No		
020-10-01 11:39:55	<input type="checkbox"/> Warning		PROBLEM		net.cisco-c2950-ios12.1	↓ ↑ No SNMP data collection ?	20d 24m	No		
020-10-01 11:39:31	<input type="checkbox"/> Warning		PROBLEM		net.cisco.c7600	↓ ↑ No SNMP data collection ?	20d 24m	No		
020-10-01 11:27:04	<input type="checkbox"/> Warning		PROBLEM		Network device	↓ Fan 3: Fan is in warning state ?	20d 37m	No		
020-09-11 15:56:55	<input type="checkbox"/> Warning		PROBLEM		Networking device for presentation	↓ ↑ No SNMP data collection ?	1m 9d 20h	No		
020-09-10 19:45:36	<input type="checkbox"/> Warning		PROBLEM		Windows 7	Free disk space is less than 20% on volume /	1m 10d 16h	No	28 →	Class: Storage Monitoring: Discovery
020-08-19 12:33:05	<input type="checkbox"/> Warning		PROBLEM		Test Demo	Lack of free swap space on Test Demo ?	2m 2d 23h	No		



# MASS UPDATE OF USER MACROS FOR HOSTS AND TEMPLATES

- ✓ Unacknowledged problems can be acknowledged and vice versa

## Hosts

[Host](#) [Templates](#) [IPMI](#) [Tags](#) [Macros](#) [Inventory](#) [Encryption](#)

Macros ☒

Add

Update

Remove

Remove all

Macro	Value	Description
<input type="text" value="{ \$MACRO }"/>	<input type="text" value="value"/>	<div><div>T</div><div>description</div></div> <div><a href="#">Remove</a></div>

Add

☐ Update existing

Update

Cancel

# MASS UPDATE OF USER MACROS FOR HOSTS AND TEMPLATES

- ✓ Mass update functionality for user macros.
- ✓ Possible to add, update and remove one or more user macros, also replace all user macros
- ✓ Conditional processing of existing macros supported for add and update operations
- ✓ Add or update one or more user macros on selected hosts or templates
- ✓ Remove or replace one, several or all user macros from selected hosts or templates



# 03

FRONTEND USABILITY  
IMPROVED EVEN FURTHER - 5.2



# PRE-MADE FILTERS FOR PROBLEMS AND HOSTS

## Hosts

<

🏠

>

>

Name

Host groups

type here to search

Select

IP

DNS

Port

Severity

☐ Not classified

☐ Warning

☐ High

☐ Information

☐ Average

☐ Disaster

Status

Any

Enabled

Disabled

Tags

And/Or

Or

tag

Contains

Equals

value

Remove

Add

Show hosts in maintenance

☒

Show suppressed problems

☐

Save as

Apply

Reset

Name ▲	Interface	Availability	Tags	Problems	Status	Latest data	Problems	Graphs	Dashboards	Web
<a href="#">Apache Node1</a>	192.168.7.105: 10050	ZBX   SNMP   JMX   IPMI	Service: Zabbix   Type: Web Engine	2	Enabled	<a href="#">Latest data</a>	<a href="#">Problems 2</a>	<a href="#">Graphs 4</a>	<a href="#">Dashboards 1</a>	<a href="#">Web</a>
<a href="#">db1</a>	127.0.0.1: 10050	ZBX   SNMP   JMX   IPMI		1	Enabled	<a href="#">Latest data</a>	<a href="#">Problems 1</a>	<a href="#">Graphs 6</a>	<a href="#">Dashboards 1</a>	<a href="#">Web</a>
<a href="#">db2</a>	127.0.0.1: 10050	ZBX   SNMP   JMX   IPMI		1	Enabled	<a href="#">Latest data</a>	<a href="#">Problems 1</a>	<a href="#">Graphs 6</a>	<a href="#">Dashboards 1</a>	<a href="#">Web</a>
<a href="#">DBCluster</a>	127.0.0.1: 10050	ZBX   SNMP   JMX   IPMI			Enabled	<a href="#">Latest data</a>	<a href="#">Problems</a>	<a href="#">Graphs 25</a>	<a href="#">Dashboards 3</a>	<a href="#">Web</a>
<a href="#">exchange server</a>	127.0.0.1: 10050	ZBX   SNMP   JMX   IPMI			Enabled	<a href="#">Latest data</a>	<a href="#">Problems</a>	<a href="#">Graphs</a>	<a href="#">Dashboards</a>	<a href="#">Web</a>
<a href="#">Kubernetes cluster</a>	127.0.0.1: 10050	ZBX   SNMP   JMX   IPMI			Enabled	<a href="#">Latest data</a>	<a href="#">Problems</a>	<a href="#">Graphs</a>	<a href="#">Dashboards</a>	<a href="#">Web</a>
<a href="#">MySQL</a>	127.0.0.1: 10050	ZBX   SNMP   JMX   IPMI			Enabled	<a href="#">Latest data</a>	<a href="#">Problems</a>	<a href="#">Graphs 25</a>	<a href="#">Dashboards 3</a>	<a href="#">Web</a>

# PRE-MADE FILTERS FOR PROBLEMS AND HOSTS

## Filter properties



\* Name

Show number of records

☐

Set custom time period

☐

From



To



Delete

Save

Cancel



# PRE-MADE FILTERS FOR PROBLEMS AND HOSTS

- ✓ Tab titles can be easily renamed, while different tabs may have same name too
- ✓ Example: "Datacentre NY", "End user services", "Critical problems"
- ✓ Reordering using drag & drop
- ✓ Last accessed tab is remembered for each user
- ✓ If some filtering option cannot be applied (for example: no permissions) - resets to a default value
- ✓ In addition to tab name, all tab titles display the following real-time information:
  - Monitoring→Problems: number of filtered problems
  - Monitoring→Hosts: number filtered hosts



# MAINTENANCE CREATION

- ✓ Maintenance, Periods, Hosts and groups tabs merged into a single screen

## Maintenance periods

\* Name

Maintenance type

With data collection

No data collection

\* Active since

2020-10-15 00:00

\* Active till

2020-10-16 00:00

\* Periods

Period type	Schedule	Period	Action
One time only	2020-10-20 16:39	1h	<a href="#">Edit</a> <a href="#">Remove</a>

[Add](#)

Host groups

type here to search

Select

Hosts

type here to search

Select

\* At least one host group or host must be selected.

Tags

And/Or

Or

tag

Contains

Equals

value

[Remove](#)

[Add](#)

Description

Add

Cancel

# INDICATION FOR SETTINGS IN USE

- ✓ Default settings – no indication
- ✓ Green indicator if custom settings
- ✓ Number of settings on the tab

## Hosts

All hosts / Zabbix server Enabled ZBX SNMP JMX IPMI

Applications 17 Items 122 Triggers 61 Graphs 23 Discovery rules 3 Web scenarios

Host Templates 2 IPMI Tags 3 Macros 6 Inventory ● Encryption

Connections to host No encryption PSK Certificate

Connections from host ☐ No encryption ☐ PSK ☐ Certificate

Update Clone Full clone Delete Cancel

# INDICATION IN PREPROCESSING INCLUDED!

- ✓ Default settings – no indication
- ✓ Green indicator if custom settings
- ✓ Number of settings on the tab

## Items

All hosts / Zabbix server Enabled ZBX SNMP JMX IPMI Applications 17 Items 122 Triggers 61 Graphs 23 Discover

Item Preprocessing 1

Parent items Template Module Linux CPU by Zabbix agent ⇒ Template OS Linux by Zabbix agent

\* Name CPU utilization

Type Dependent item

\* Key system.cpu.util

\* Master item Zabbix server: CPU idle time X Select

Type of information Numeric (float)

Units %

# TEMPLATED SCREENS = **TEMPLATED DASHBOARDS**

<a href="#">server.ibm.12</a>	10.100.0.12: 161	ZBX <b>SNMP</b> JMX IPMI	Enabled	<a href="#">Latest data</a>	<a href="#">Problems</a>	<a href="#">Graphs 4</a>	<a href="#">Screens 1</a>	<a href="#">Web</a>
<a href="#">server.ibm.13</a>	10.100.0.13: 161	ZBX <b>SNMP</b> JMX IPMI	Enabled	<a href="#">Latest data</a>	<a href="#">Problems</a>	<a href="#">Graphs 4</a>	<a href="#">Screens 1</a>	<a href="#">Web</a>
<a href="#">server.ibm.14</a>	10.100.0.14: 161	ZBX <b>SNMP</b> JMX IPMI	Enabled	<a href="#">Latest data</a>	<a href="#">Problems</a>	<a href="#">Graphs 4</a>	<a href="#">Screens 1</a>	<a href="#">Web</a>
<a href="#">server.ibm.15</a>	10.100.0.15: 161	ZBX <b>SNMP</b> JMX IPMI	Enabled	<a href="#">Latest data</a>	<a href="#">Problems</a>	<a href="#">Graphs 4</a>	<a href="#">Screens 1</a>	<a href="#">Web</a>

Before

<a href="#">server.ibm.12</a>	10.100.0.12: 161	ZBX <b>SNMP</b> JMX IPMI	Enabled	<a href="#">Latest data</a>	<a href="#">Problems</a>	<a href="#">Graphs 14</a>	<a href="#">Dashboards 3</a>	<a href="#">Web</a>
<a href="#">server.ibm.13</a>	10.100.0.13: 161	ZBX <b>SNMP</b> JMX IPMI	Enabled	<a href="#">Latest data</a>	<a href="#">Problems</a>	<a href="#">Graphs 14</a>	<a href="#">Dashboards 3</a>	<a href="#">Web</a>
<a href="#">server.ibm.14</a>	10.100.0.14: 161	ZBX <b>SNMP</b> JMX IPMI	Enabled	<a href="#">Latest data</a>	<a href="#">Problems</a>	<a href="#">Graphs 14</a>	<a href="#">Dashboards 3</a>	<a href="#">Web</a>
<a href="#">server.ibm.15</a>	10.100.0.15: 161	ZBX <b>SNMP</b> JMX IPMI	Enabled	<a href="#">Latest data</a>	<a href="#">Problems</a>	<a href="#">Graphs 14</a>	<a href="#">Dashboards 3</a>	<a href="#">Web</a>

After

# TEMPLATED SCREENS = TEMPLATED DASHBOARDS

**ZABBIX** << < > >>

## New dashboard

All templates / Template App Zabbix Server / Applications 1 / Items 46 / Triggers 34 / Graphs 6 / Dashboards 1 / Discovery rules / Web scenarios

+ Add widget Paste widget Save changes Cancel

Add a new widget

**Dashboard properties**

\* Name

Apply Cancel

Zabbix 5.2.0alpha1. © 2001–2020, Zabbix SIA



# HOSTS **WITHOUT INTERFACES**

## Hosts

[Host](#) [Templates](#) [IPMI](#) [Tags](#) [Macros](#) [Inventory](#) [Encryption](#)

\* Host name

I only need web checks

Visible name

I only need web checks

\* Groups

Web checks (new) ✕

type here to search

Select

Interfaces

No interfaces are defined.  
[Add](#)

Description

Monitored by proxy

(no proxy) ▾

Enabled

☒

Add

Cancel

# HOSTS WITHOUT **INTERFACES**

- ☑ Where can we use this?
  - trapper based monitoring
  - services checks only
  - host created for aggregated items.
  - Host for web checks



# INCLUDING HOST PROTOTYPES

- ✓ Host prototypes can continue to inherit interfaces from parent
- ✓ Or have a fully custom interface

## Host prototypes

[All hosts](#) / [Zabbix server](#) Enabled ZBX SNMP JMX IPMI [Discovery list](#) / [Block devices discovery](#) [Item prototypes 9](#) [Trigger prototypes 1](#) [Graph prototypes 3](#) [Host prototypes](#)

[Host](#) [Groups](#) [Templates](#) [IPMI](#) [Tags](#) [Macros](#) [Inventory](#) [Encryption](#)

\* Host name

Visible name

Interfaces 

Inherit

Custom

Type	IP address	DNS name	Connect to	Port	Default
Agent	<input type="text" value="127.0.0.1"/>	<input type="text"/>	<div><div>IP</div><div>DNS</div></div>	<input type="text" value="10050"/>	<input type="radio"/>

Monitored by proxy

Create enabled ☒

Discover ☒

Add

Cancel

# HOST PROTOTYPES **WITH TAGS**

- ✓ Tags of host prototypes support LLD macros in tag values
- ✓ Import/export of host prototypes will include information about tags
- ✓ Discovered hosts may contain its own set of tags with useful information (datacentre, instance type, resource type, etc).

## Host prototypes

[All hosts](#) / [Zabbix server](#) Enabled **ZBX** [SNMP](#) [JMX](#) [IPMI](#) [Discovery list](#) / [Block devices discovery](#) [Item prototypes](#) 9 [Trigger prototypes](#) 1 [Graph prototypes](#) 3 [Host prototypes](#)

[Host](#) [Groups](#) [Templates](#) [IPMI](#) **[Tags 2](#)** [Macros](#) [Inventory](#) [Encryption](#)

Name	Value	Action
<input type="text" value="Hypervisor"/>	<input type="text" value="A"/>	<a href="#">Remove</a>
<input type="text" value="Data Center"/>	<input type="text" value="Oceania"/>	<a href="#">Remove</a>

[Add](#)

# USER MACRO SIZE IS NOW 2048

## Step of web scenario

\* Name

\* URL

Query fields

Name

Value



[Remove](#)

[Add](#)

Post type

Raw post

Variables

Name

Value



[Remove](#)

[Add](#)

# USER MACRO IN DESCRIPTION

- ✓ User macros are now supported in item and low-level discovery rule descriptions.

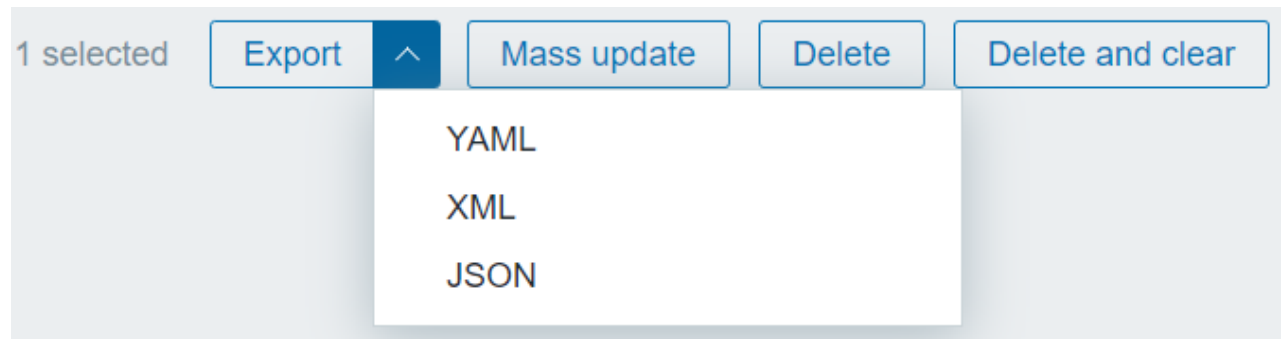
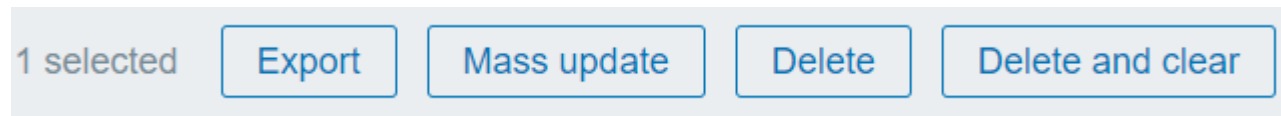
▼ <input type="checkbox"/> Host	Name ▲	Last check	Last value
▼ <u>Zabbix server</u>	- other - (1 Item)		
<input type="checkbox"/>	Zabbix.com status ?		
The result of {\$SPECIFIC.URL} check			

▼ <input type="checkbox"/> Host	Name ▲	Last check	Last value
▼ <u>Zabbix server</u>	- other - (1 Item)		
<input type="checkbox"/>	Zabbix.com status ?		
The result of <a href="https://www.zabbix.com/events/zabbix_summit_2020">https://www.zabbix.com/events/zabbix_summit_2020</a> check			



# EXPORT IN **YAML** AND **JSON**



# EXPORT IN YAML

```
zabbix_export:
  version: '5.2'
  date: '2020-10-15T21:18:18Z'
  groups:
    -
      name: 'Templates/Operating systems'
  templates:
    -
      template: 'Template OS Linux by Zabbix agent'
      name: 'Template OS Linux by Zabbix agent'
      description: |
        Official Linux template. Requires agent of Zabbix 3.0.14, 3.4.5 and 4.0.0 or newer.

        Known Issues:

        Description: Network discovery.
        Zabbix agent as of 4.2 doesn't support items such as net.if.status, net.if.speed.

        You can discuss this template or leave feedback
        on our forum
        https://www.zabbix.com/forum/zabbix-suggestions-and-feedback/387225-discussion-thread-for-official-zabbix-template-for-linux

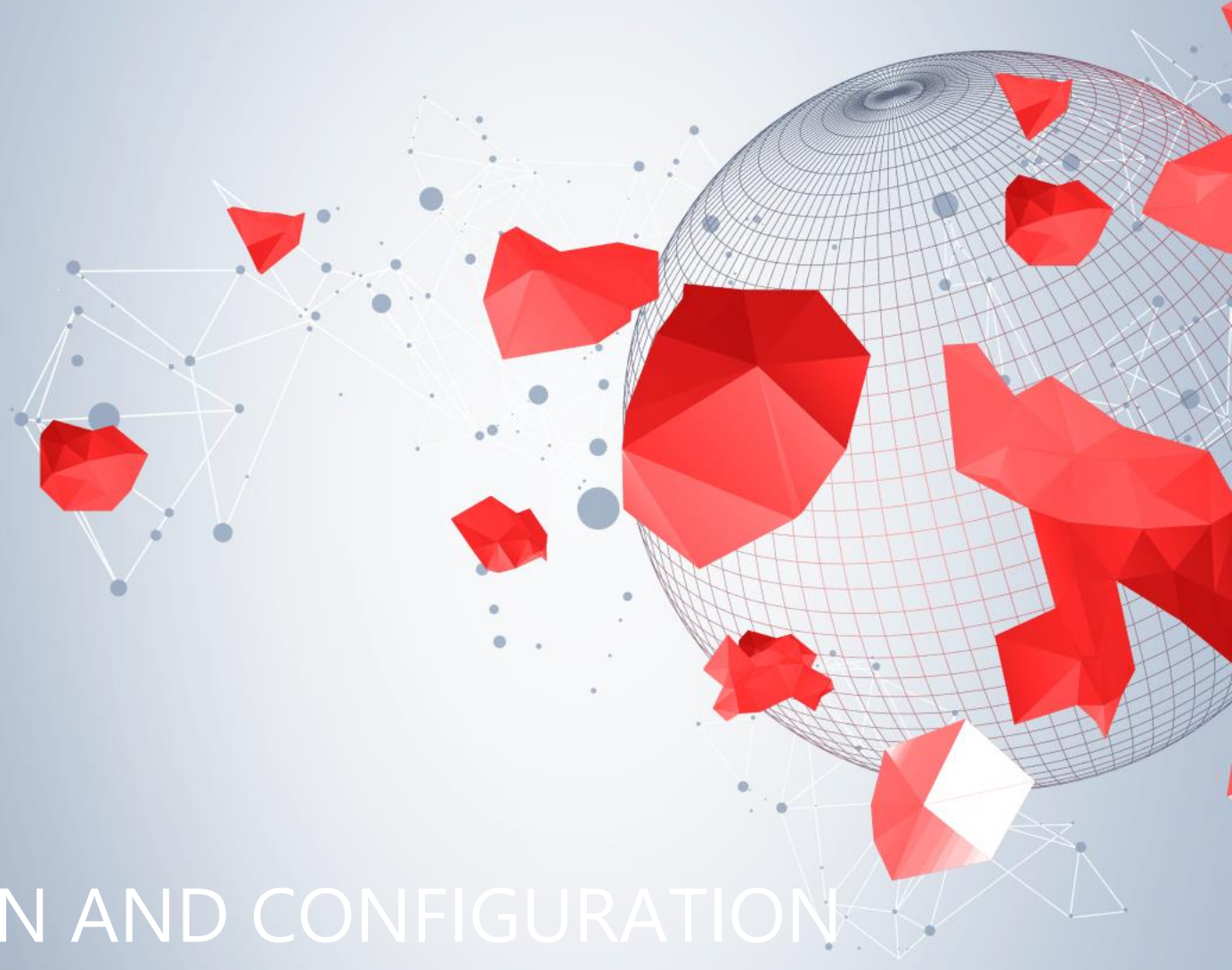
        Template tooling version used: 0.36
  templates:
    -
      name: 'Template Module Linux block devices by Zabbix agent'
    -
      name: 'Template Module Linux CPU by Zabbix agent'
    -
      name: 'Template Module Linux filesystems by Zabbix agent'
    -
      name: 'Template Module Linux generic by Zabbix agent'
    -
      name: 'Template Module Linux memory by Zabbix agent'
    -
      name: 'Template Module Linux network interfaces by Zabbix agent'
    -
      name: 'Template Module Zabbix agent'
  groups:
    -
      name: 'Templates/Operating systems'
  dashboards:
```

# EXPORT IN JSON

```
{
  "zabbix_export": {
    "version": "5.2",
    "date": "2020-10-15T21:18:22Z",
    "groups": [
      {
        "name": "Templates/Operating systems"
      }
    ],
    "templates": [
      {
        "template": "Template OS Linux by Zabbix agent",
        "name": "Template OS Linux by Zabbix agent",
        "description": "Official Linux template. Requires agent of Zabbix 3.0.14, 3.4.5 and 4.0.0 or newer.\n\nKnown Issues:\n\n",
        "templates": [
          {
            "name": "Template Module Linux block devices by Zabbix agent"
          },
          {
            "name": "Template Module Linux CPU by Zabbix agent"
          },
          {
            "name": "Template Module Linux filesystems by Zabbix agent"
          },
          {
            "name": "Template Module Linux generic by Zabbix agent"
          },
          {
            "name": "Template Module Linux memory by Zabbix agent"
          },
          {
            "name": "Template Module Linux network interfaces by Zabbix agent"
          },
          {
            "name": "Template Module Zabbix agent"
          }
        ],
        "groups": [
          {
            "name": "Templates/Operating systems"
          }
        ]
      }
    ]
  }
}
```

# 04

## FRONTEND INSTALLATION AND CONFIGURATION – 5.2

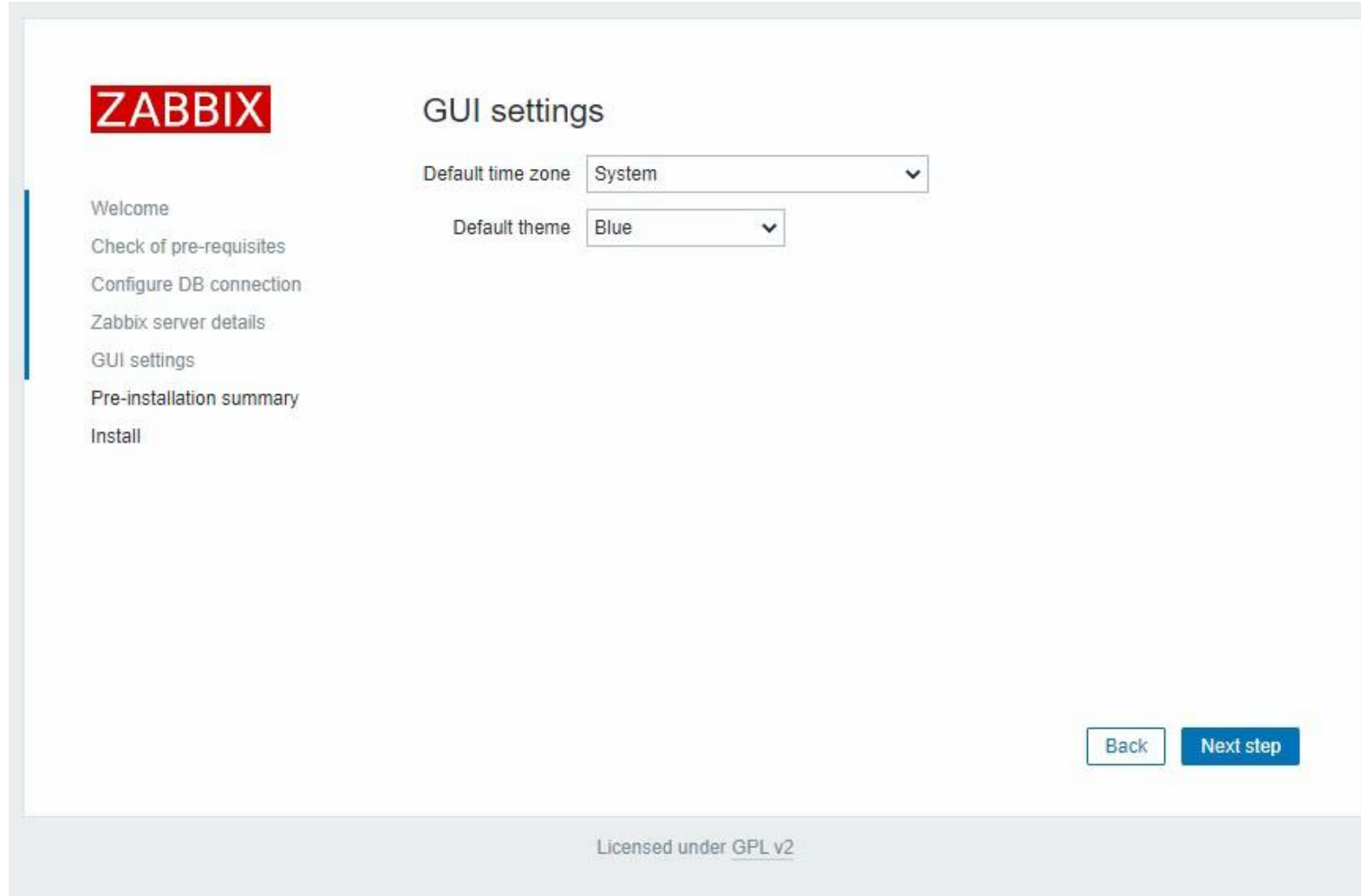


# FRONTEND INSTALLATION



After

# FRONTEND INSTALLATION



The image shows the Zabbix Frontend Installation GUI settings screen. On the left is a sidebar with the ZABBIX logo and a list of installation steps: Welcome, Check of pre-requisites, Configure DB connection, Zabbix server details, GUI settings (highlighted), Pre-installation summary, and Install. The main area is titled 'GUI settings' and contains two dropdown menus: 'Default time zone' set to 'System' and 'Default theme' set to 'Blue'. At the bottom right are 'Back' and 'Next step' buttons. At the bottom center, it says 'Licensed under [GPL v2](#)'.

**ZABBIX**

GUI settings

Default time zone

Default theme

Back Next step

Licensed under [GPL v2](#)

After



# FRONTEND - USER PROFILE

User profile: Zabbix Administrator

UserMediaMessaging

Password

Change password

Language

System default

▼

i

Time zone

System default

▼

Theme

System default

▼

Auto-login

☒

Auto-logout

☐

15m

\* Refresh

30s

\* Rows per page

50

URL (after login)

Update

Cancel

# FRONTEND - GUI SETTINGS

- ✓ Working time settings moved to GUI menu
- ✓ Trigger menus – united
- ✓ More experience enhancing options added

## GUI ▾

- GUI
- Autoregistration
- Housekeeping
- Images
- Icon mapping
- Regular expressions
- Macros
- Value mapping
- Trigger displaying options
- Modules
- Other

# FRONTEND - GUI SETTINGS

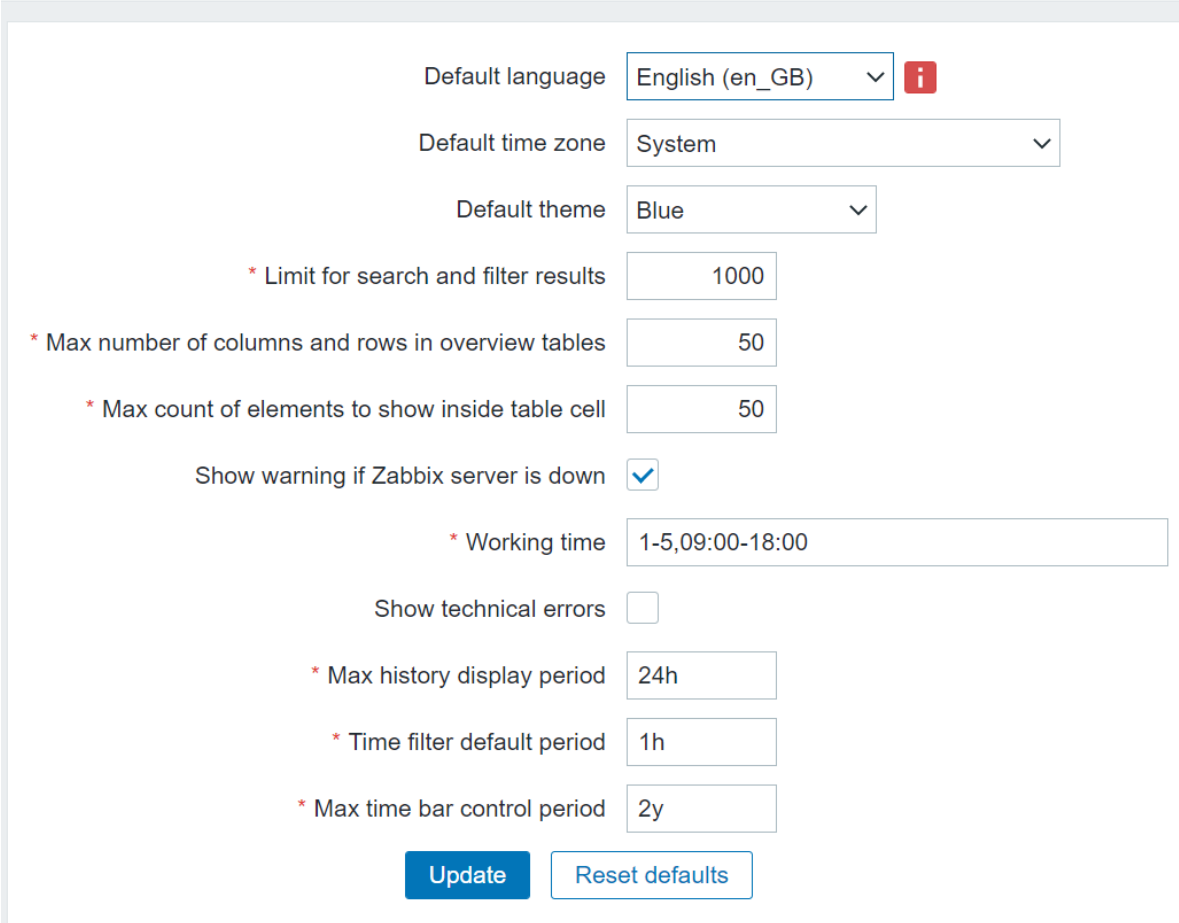
Includes Working hours field

- ✓ Working time is displayed as a white background in graphs
- ✓ Non-working time is displayed in grey.

New parameters:

- ✓ Max number of columns and rows in overview tables
- ✓ Show technical errors
- ✓ Max history display period
- ✓ Default period (for graphs and dashboards)
- ✓ Max period (for graphs and dashboards).

## GUI ▾



The screenshot shows the Zabbix GUI settings page for the 'GUI' section. The settings are as follows:

- Default language: English (en\_GB) (with an information icon)
- Default time zone: System
- Default theme: Blue
- \* Limit for search and filter results: 1000
- \* Max number of columns and rows in overview tables: 50
- \* Max count of elements to show inside table cell: 50
- Show warning if Zabbix server is down: ☒
- \* Working time: 1-5,09:00-18:00
- Show technical errors: ☐
- \* Max history display period: 24h
- \* Time filter default period: 1h
- \* Max time bar control period: 2y

At the bottom, there are two buttons: 'Update' and 'Reset defaults'.

# FRONTEND - TRIGGER DISPLAYING

- Trigger displaying options and trigger severities united

## Trigger displaying options ▾

Use custom event status colours ☒

\* Unacknowledged PROBLEM events

CC0000

☒ blinking

\* Acknowledged PROBLEM events

CC0000

☒ blinking

\* Unacknowledged RESOLVED events

009900

☒ blinking

\* Acknowledged RESOLVED events

009900

☒ blinking

\* Display OK triggers for

5m

\* On status change triggers blink for

2m

\* Not classified

Not classified

97AAB3

\* Information

Information

7499FF

\* Warning

Warning

FFC859

\* Average

Average

FFA059

\* High

High

E97659

\* Disaster

Disaster

E45959

Custom severity names affect all locales and require manual translation!

Update

Reset defaults

# FRONTEND - OTHER

- ✓ Three additional parameter groups:
- ✓ Authorization, which allows to set number of failed login attempts and period of blocking login page after exceeding this limit;
- ✓ Security, which allows to set URI scheme validation rules, X-Frame-Options HTTP header, and custom iframe sandboxing restrictions;
- ✓ Communication with Zabbix server, which allows to customize timeout limits.

## Other configuration parameters ▾

The screenshot shows the 'Other configuration parameters' settings page in the Zabbix frontend. The page is organized into several sections with various input fields and checkboxes. At the top, there are settings for 'Refresh unsupported items' (10m), 'Group for discovered hosts' (Discovered hosts), 'Default host inventory mode' (Disabled, Manual, Automatic), and 'User group for database down message' (Zabbix administrators). Below these is a checkbox for 'Log unmatched SNMP traps'. The 'Authorization' section includes 'Login attempts' (5) and 'Login blocking interval' (30s). The 'Security' section includes 'Validate URI schemes' (checked), 'Valid URI schemes' (http,https,ftp,file,mailto,tel,ssh), 'X-Frame-Options HTTP header' (SAMEORIGIN), 'Use iframe sandboxing' (checked), and 'Iframe sandboxing exceptions'. The 'Communication with Zabbix server' section includes 'Network timeout' (3s), 'Connection timeout' (3s), 'Network timeout for media type test' (65s), 'Network timeout for script execution' (60s), and 'Network timeout for item test' (60s). At the bottom right, there are 'Update' and 'Reset defaults' buttons.

* Refresh unsupported items	10m		
* Group for discovered hosts	Discovered hosts ✕	Select	
Default host inventory mode	Disabled	Manual	Automatic
User group for database down message	Zabbix administrators ✕	Select	
Log unmatched SNMP traps	<input checked="" type="checkbox"/>		
Authorization			
* Login attempts	5		
* Login blocking interval	30s		
Security			
Validate URI schemes	<input checked="" type="checkbox"/>		
Valid URI schemes	http,https,ftp,file,mailto,tel,ssh		
* X-Frame-Options HTTP header	SAMEORIGIN		
Use iframe sandboxing	<input checked="" type="checkbox"/>		
Iframe sandboxing exceptions			
Communication with Zabbix server			
* Network timeout	3s		
* Connection timeout	3s		
* Network timeout for media type test	65s		
* Network timeout for script execution	60s		
* Network timeout for item test	60s		
Update		Reset defaults	

# 05

IMPROVE USABILITY EVEN MORE





# HOW **YOU** CAN MAKE ZABBIX BETTER

- ✓ If you find a bug – report it
- ✓ Create a feature request
- ✓ Involve people around you
- ✓ Contact our team
- ✓ Create your own module or work with community



Thank you!

