



Webinar

# Data visualization with zabbix

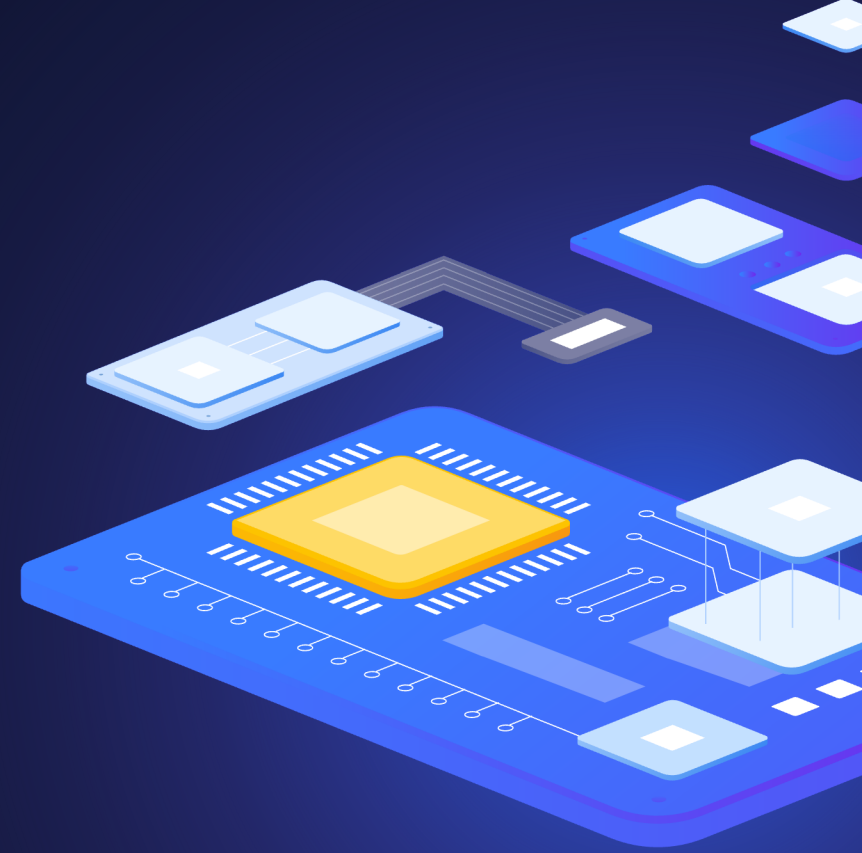
all our microphones are muted

ask your questions in Q&A, not in the Chat

use Chat for discussion, networking or applause

1

Latest Data



# Data visualization with zabbix

# LATEST DATA

## Monitoring > Latest data

- ▶ Performance data for a selected server/group
- ▶ Simple graphs
- ▶ Plain text information
- ▶ Config details

Timestamp	Processor load (15 min average per core)
2022-04-13 15:52:15	0.045
2022-04-13 15:51:15	0.045
2022-04-13 15:50:15	0.045
2022-04-13 15:49:15	0.045
2022-04-13 15:48:15	0.035
2022-04-13 15:47:15	0.035
2022-04-13 15:46:15	0.04

Latest data

Host groups: type here to search [Select]      Tags: And/Or Or

Hosts: Zabbix server x type here to search [Select]      tag Contains value [Remove]

Name: [ ]      Add

Show tags: None 1 2 3 Tag name: Full Shortened None

Tag display priority: comma-separated list

Show details:

[Save as] [Apply] [Reset]

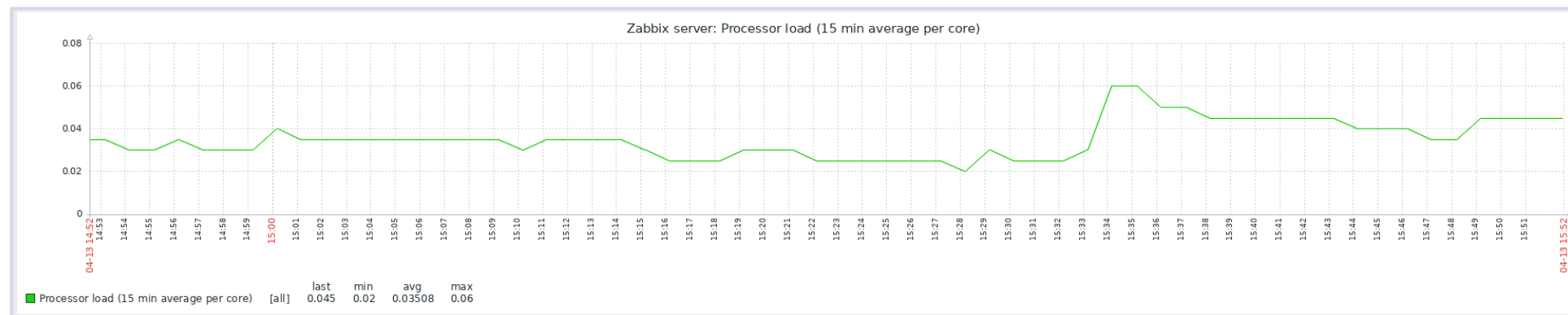
Subfilter affects only filtered data

TAGS  
component 103 node-id 4 node-name 4

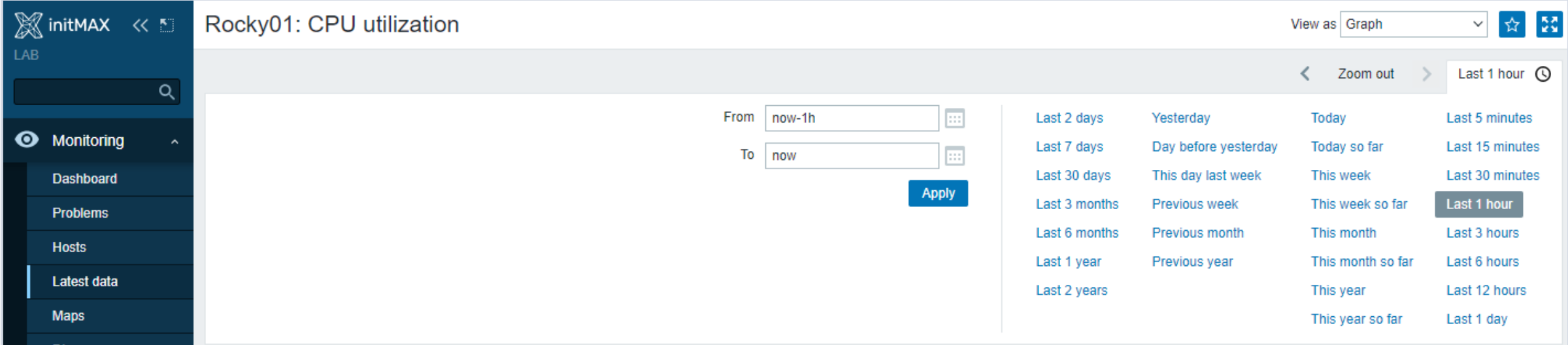
TAG VALUES  
component: application 1 cluster 4 cpu 17 data-collector 13 environment 2 internal-process 20 memory 7 os 3 raw 1 storage 3 system 35  
node-id: c11w239wq0014qnp71vxceh 4  
node-name: None 4

DATA  
With data 53 Without data 50

<input type="checkbox"/>	Host	Name	Last check	Last value	Change	Tags	Info
<input type="checkbox"/>	Zabbix server	Available memory				component: memory	Graph
<input type="checkbox"/>	Zabbix server	Available memory in %				component: memory	Graph
<input checked="" type="checkbox"/>	Zabbix server	Checksum of /etc/passwd				component: environment	History
<input checked="" type="checkbox"/>	Zabbix server	Cluster node [ ] Address	7h 57m 18s	localhost:10051		component: cluster node-id: c11w239wq00... node-name	History
<input type="checkbox"/>	Zabbix server	Cluster node [ ] Last access age	18s	00:00:00		component: cluster node-id: c11w239wq00... node-name	Graph
<input type="checkbox"/>	Zabbix server	Cluster node [ ] Last access time	18s	2022-04-13 15:50:25	+00:01:00	component: cluster node-id: c11w239wq00... node-name	Graph
<input type="checkbox"/>	Zabbix server	Cluster node [ ] Status	7h 57m 18s	Active (3)		component: cluster node-id: c11w239wq00... node-name	Graph
<input type="checkbox"/>	Zabbix server	Context switches per second				component: cpu	Graph
<input type="checkbox"/>	Zabbix server	CPU guest nice time				component: cpu	Graph
<input type="checkbox"/>	Zabbix server	CPU guest time				component: cpu	Graph
<input type="checkbox"/>	Zabbix server	CPU idle time				component: cpu	Graph



# LATEST DATA



The screenshot shows the Zabbix web interface for monitoring 'Rocky01: CPU utilization'. The interface includes a sidebar with navigation options like 'Monitoring', 'Dashboard', 'Problems', 'Hosts', 'Latest data', and 'Maps'. The main content area displays the title 'Rocky01: CPU utilization' and a 'View as' dropdown set to 'Graph'. Below this, there is a 'Zoom out' button and a time period selector. The time period selector is currently set to 'Last 1 hour'. To the left of the selector, there are input fields for 'From' (now-1h) and 'To' (now), with an 'Apply' button. A grid of time period options is visible, including 'Last 2 days', 'Yesterday', 'Today', 'Last 5 minutes', 'Last 7 days', 'Day before yesterday', 'Today so far', 'Last 15 minutes', 'Last 30 days', 'This day last week', 'This week', 'Last 30 minutes', 'Last 3 months', 'Previous week', 'This week so far', 'Last 1 hour', 'Last 6 months', 'Previous month', 'This month', 'Last 3 hours', 'Last 1 year', 'Previous year', 'This month so far', 'Last 6 hours', 'Last 2 years', 'This year', 'Last 12 hours', and 'This year so far', 'Last 1 day'.

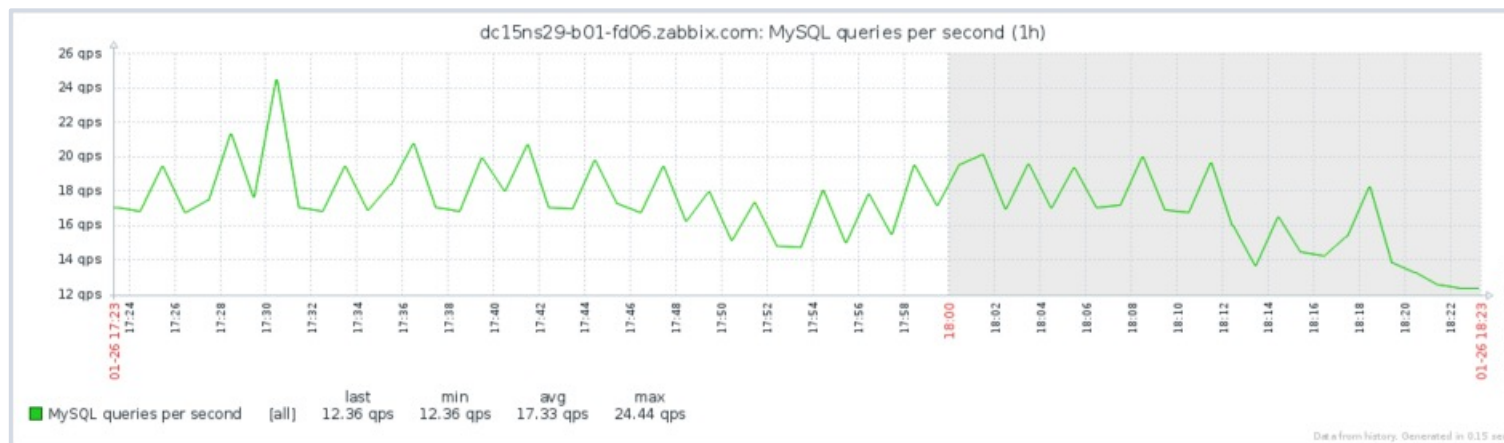
## In the top right, there is a time period selector

- ▶ It allows to select required period with a mouse click
- ▶ This allows to show values for specific time period

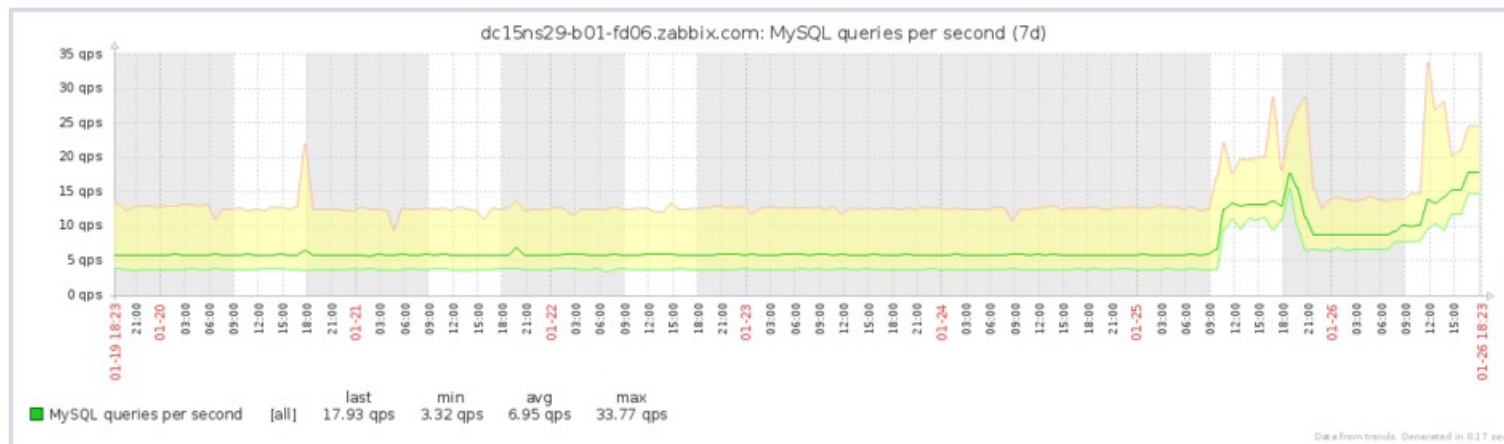
## Data visualization with zabbix

# SIMPLE GRAPHS


### History ( raw data )



### Trends (min, max, avg)



## SIMPLE GRAPHS


initMAX

### Latest data

< DEMO-SERVER
>

Host groups: DEMO/hosts

Hosts: DEMO-SERVER

Name: CPU

Tags: And/Or Or

Contains

[Add](#)

Show tags: None 1 2 3 Tag name Full Shortened None

Tag display priority:

Show details:

Subfilter affects only filtered data

TAG VALUES

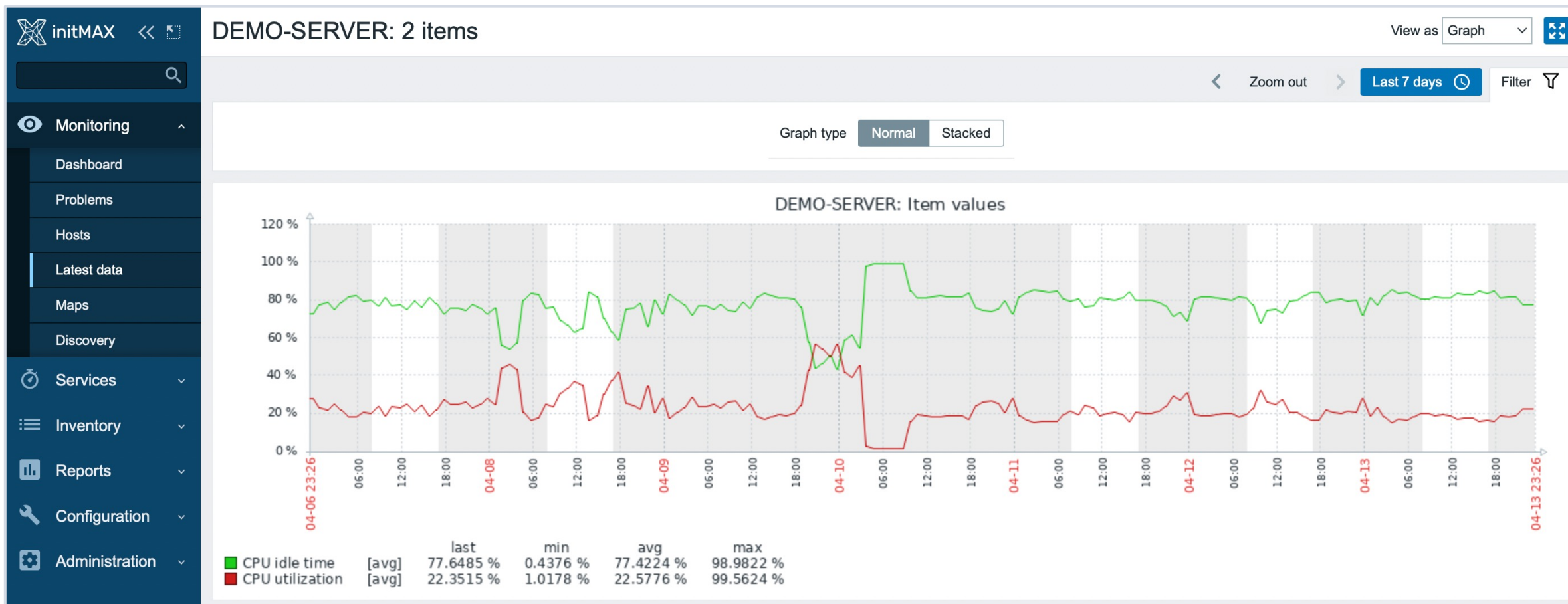
Application: CPU 2

<input checked="" type="checkbox"/>	Host	Name	Last check	Last value	Change	Tags	Info
<input checked="" type="checkbox"/>	DEMO-SERVER	CPU idle time <span style="font-size: x-small;">?</span>	15s	80.2008 %	+8.7639 %	Application: CPU	<a href="#">Graph</a>
<input checked="" type="checkbox"/>	DEMO-SERVER	CPU utilization <span style="font-size: x-small;">?</span>	15s	19.7992 %	-8.7639 %	Application: CPU	<a href="#">Graph</a>

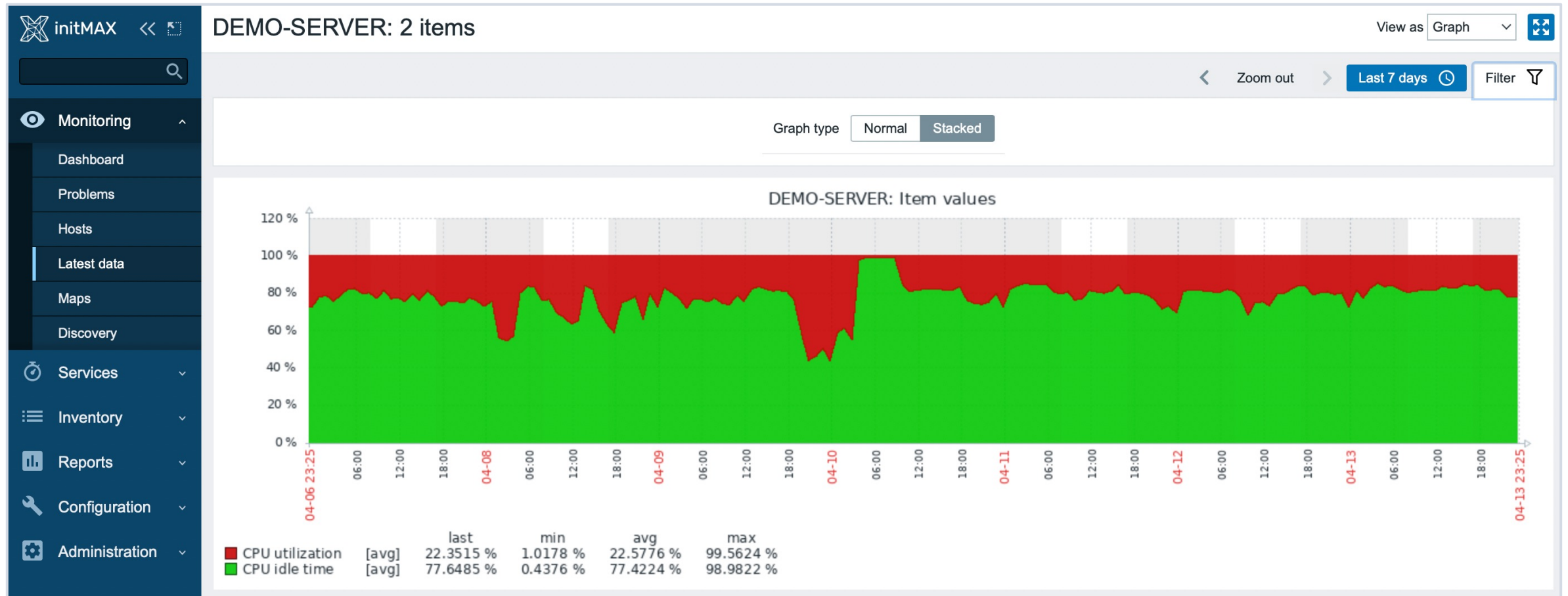
Displaying 2 of 2 found

2 selected

# SIMPLE GRAPHS



# SIMPLE GRAPHS





## Data visualization with zabbix

# Tags vs Applications

### Group of items

- › One application, many items
- › One item, many applications

### Since Zabbix 5.4 - Applications moved to Item Tags

Host groups  Select

Hosts  Select

Name

Tags And/Or Or

Application Equals  Remove

Add

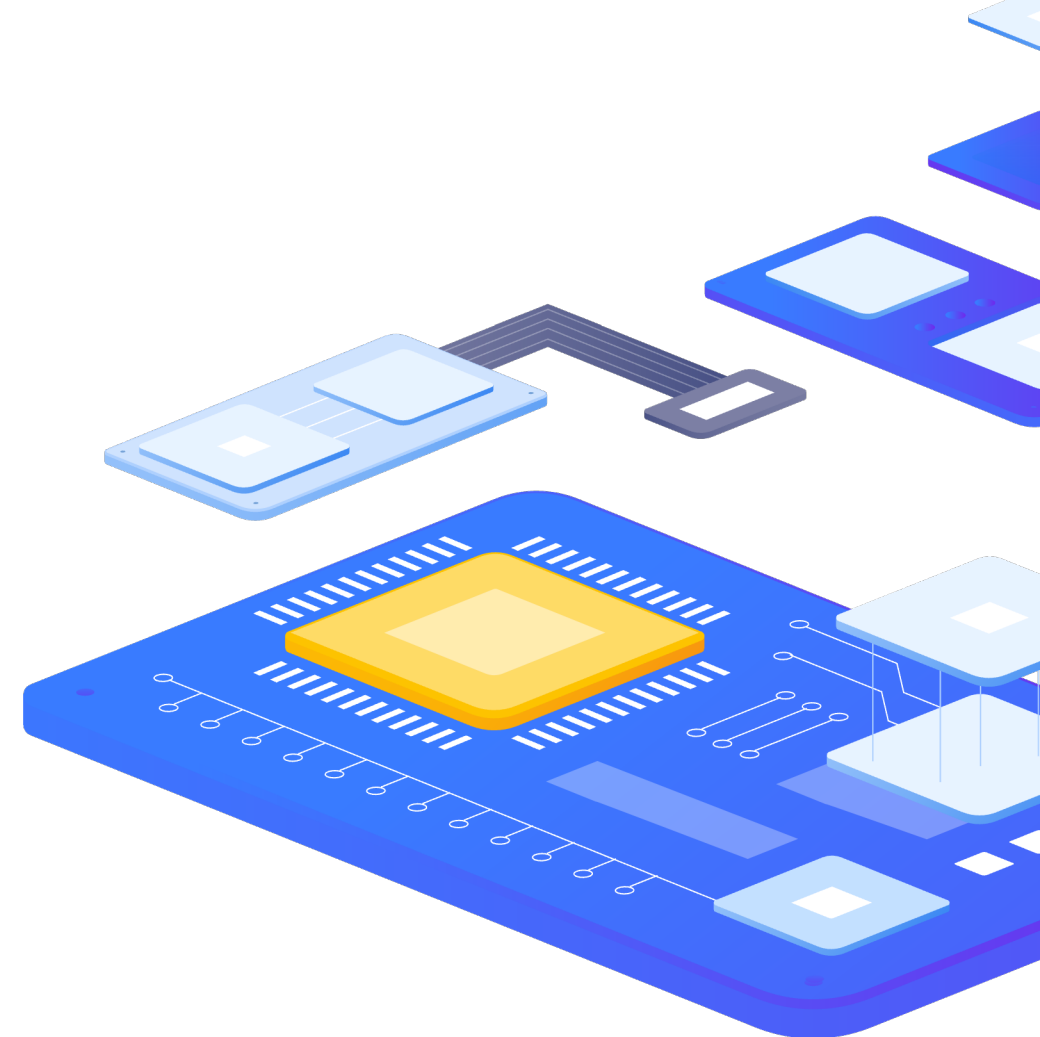
Show tags None 1 2 3 Filtered None

Tag display priority

Show details

Save as Apply Reset

Name ▲	Last check	Last value	Change	Tags
<a href="#">Context switches per second</a>	15s	921.9097	+146.2828	<span>Application: CPU</span>
<a href="#">CPU guest nice time <sup>?</sup></a>	14s	0 %		<span>Application: CPU</span>
<a href="#">CPU guest time <sup>?</sup></a>	13s	0 %		<span>Application: CPU</span>
<a href="#">CPU idle time <sup>?</sup></a>	5s	95.8894 %	-1.421 %	<span>Application: CPU</span>
<a href="#">CPU interrupt time <sup>?</sup></a>	11s	0.2256 %	+0.0168 %	<span>Application: CPU</span>
<a href="#">CPU iowait time <sup>?</sup></a>	16s	0.01671 %	+0.008357 %	<span>Application: CPU</span>



# 2

## Graphs and Classic graphs



# CUSTOM GRAPHS (LEGACY)

## Configuration > Templates > Graphs

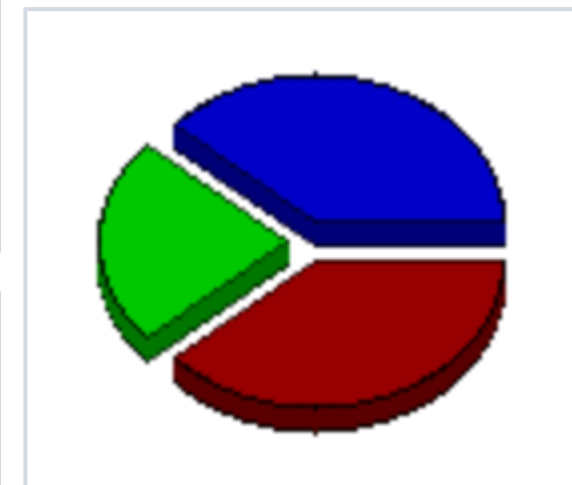
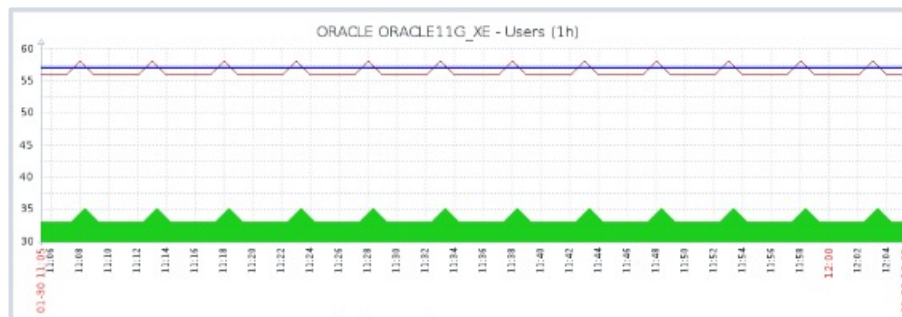
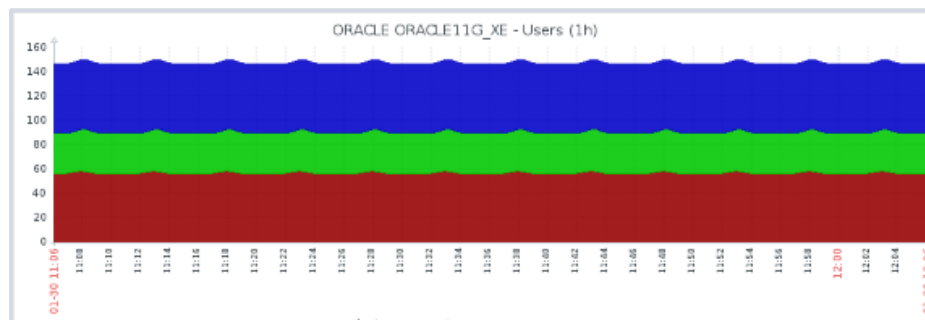
- › Multiple items in a single customized graph
- › Multiple graph types
- › Normal
- › Stacked
- › Pie
- › Exploded pie

Draw style

Line

Filled region

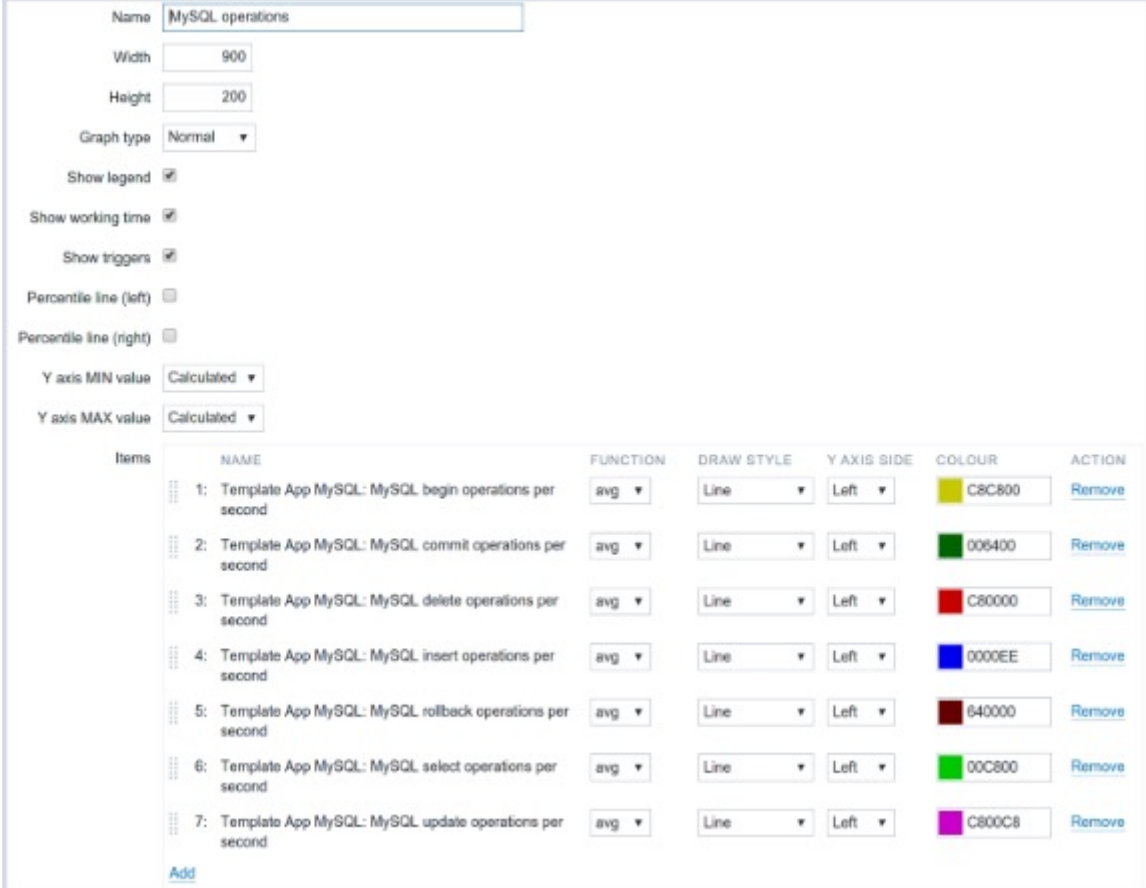
Bold line



## Data visualization with zabbix

# CUSTOM GRAPHS (LEGACY)

- ▶ Legend, working time, trigger line, percentile lines (left/right)
- ▶ Automatic, fixed or referenced Y axis min/max
- ▶ Multiple items on two axis with different colors & draw styles



The screenshot shows the configuration for a Zabbix custom graph named "MySQL operations". The graph has a width of 900 and a height of 200. The graph type is set to "Normal". The "Show legend", "Show working time", and "Show triggers" options are checked. The "Percentile line (left)" and "Percentile line (right)" options are unchecked. The Y axis MIN value and Y axis MAX value are both set to "Calculated".

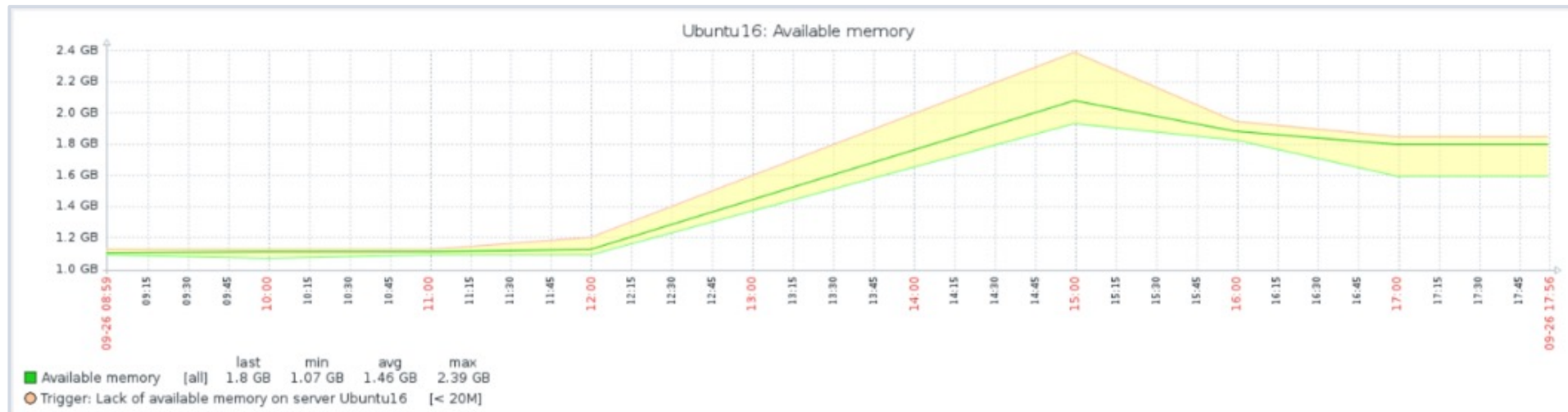
Items	NAME	FUNCTION	DRAW STYLE	Y AXIS SIDE	COLOUR	ACTION
1:	Template App MySQL: MySQL begin operations per second	avg	Line	Left	C8C800	<a href="#">Remove</a>
2:	Template App MySQL: MySQL commit operations per second	avg	Line	Left	006400	<a href="#">Remove</a>
3:	Template App MySQL: MySQL delete operations per second	avg	Line	Left	C80000	<a href="#">Remove</a>
4:	Template App MySQL: MySQL insert operations per second	avg	Line	Left	0000EE	<a href="#">Remove</a>
5:	Template App MySQL: MySQL rollback operations per second	avg	Line	Left	840000	<a href="#">Remove</a>
6:	Template App MySQL: MySQL select operations per second	avg	Line	Left	00C800	<a href="#">Remove</a>
7:	Template App MySQL: MySQL update operations per second	avg	Line	Left	C800C8	<a href="#">Remove</a>

[Add](#)

# CUSTOM GRAPHS (LEGACY)

## Ability to select what values will be displayed for Trend graphs:

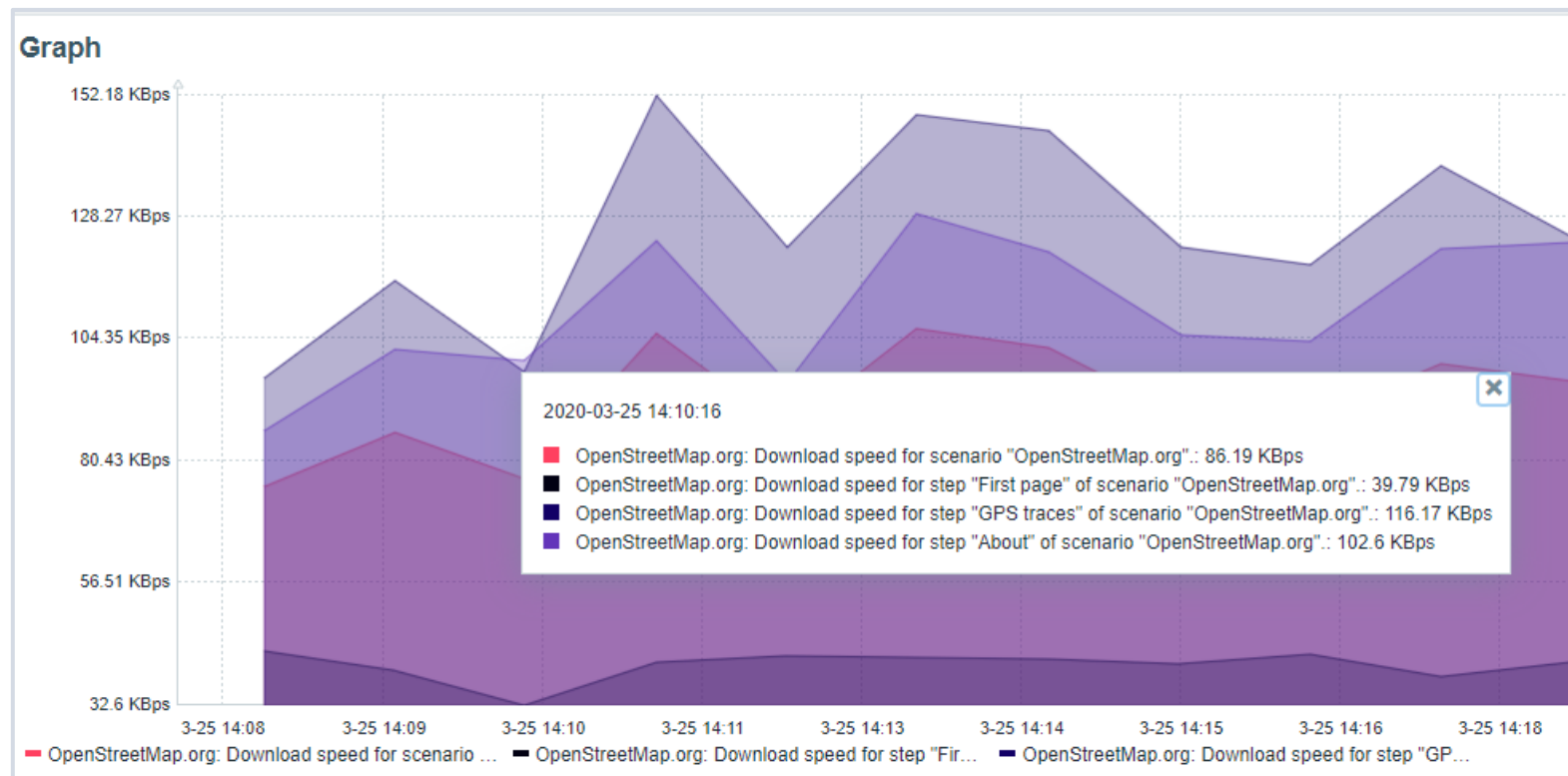
- › avg - display the average values
- › last - display the latest values
- › max - display the maximum values
- › min - display the minimum values
- › all - display all possible values



## Data visualization with zabbix

# CUSTOM GRAPHS (NEW)

- ▶ In version 4.0 the graph widget was updated to use redesigned new graphs!
- ▶ Legacy graph widget has been renamed to Graph (classic)



## Data visualization with zabbix

# CUSTOM GRAPHS (NEW)

- ▶ Uses vector image file format
- ▶ Displaying of values is based on Data sets, which are comprised of hosts and items
- ▶ Wildcard use is supported when referencing hosts/items!

■ Zabbix server: Zabbix configuration cache, % u... 
 ■ Zabbix server: Zabbix history index cache, % us... 
 ■ Zabbix server: Zabbix history write cache, % used

[Data set](#) [Displaying options](#) [Time period](#) [Axes](#) [Legend](#) [Problems](#) [Overrides](#)

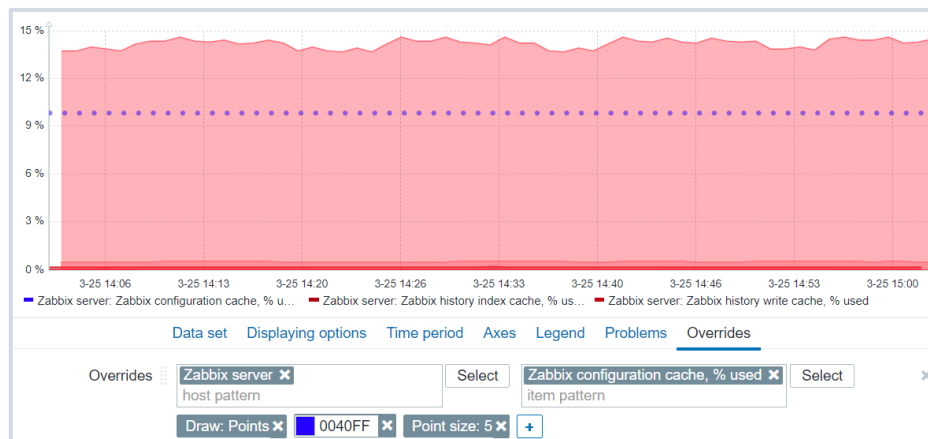
Data set ■

host pattern

Base colour ■ FF465C

Missing data

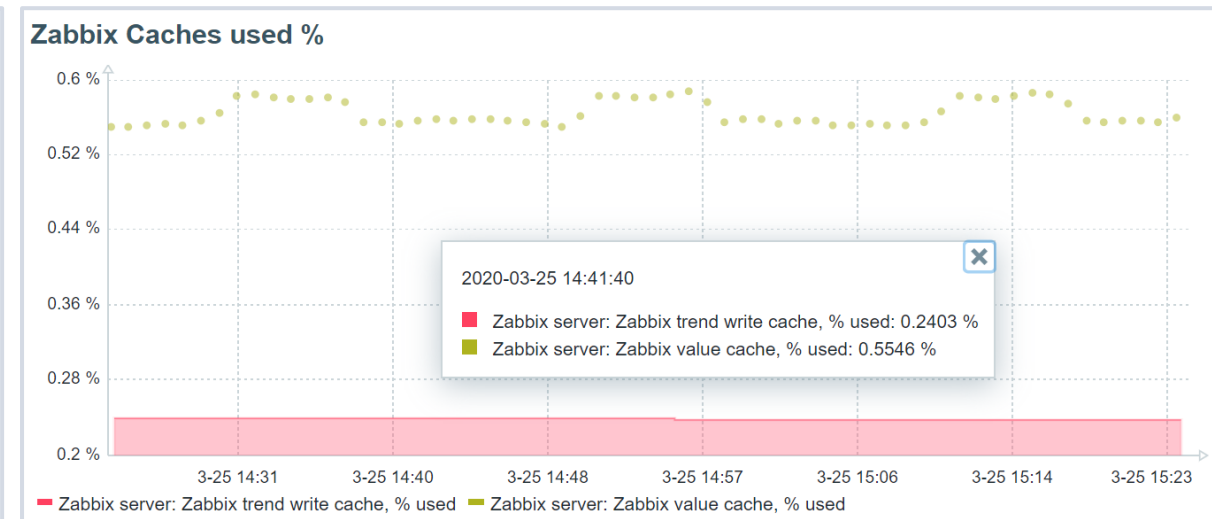
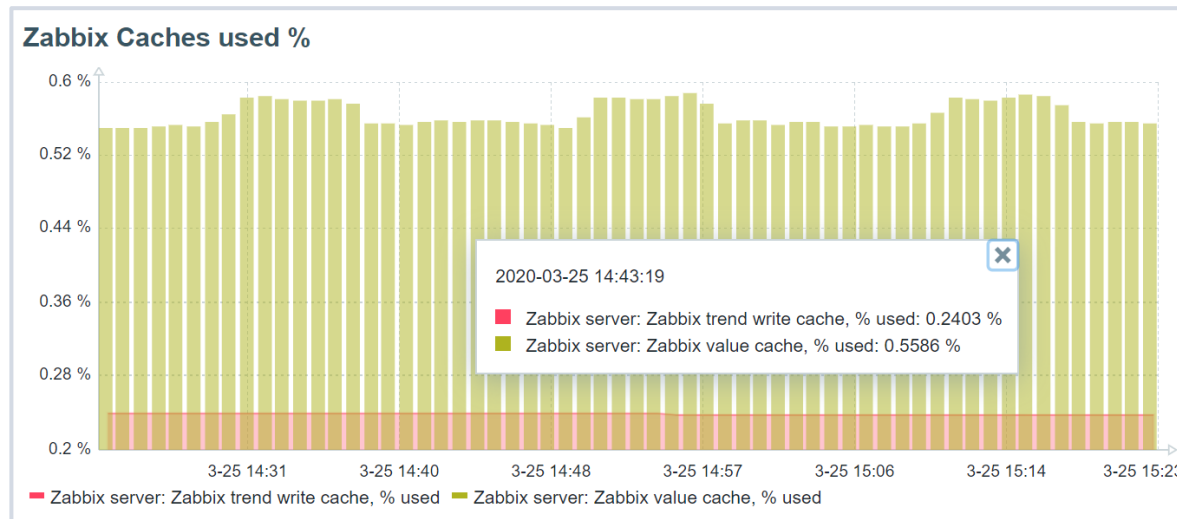
- ▶ Parameters of a Data set element can be overridden in the “ Overrides ” section



# CUSTOM GRAPHS (NEW)

The following graph types are supported for the New graph:

- ▶ Line
- ▶ Points
- ▶ Staircase
- ▶ Bar





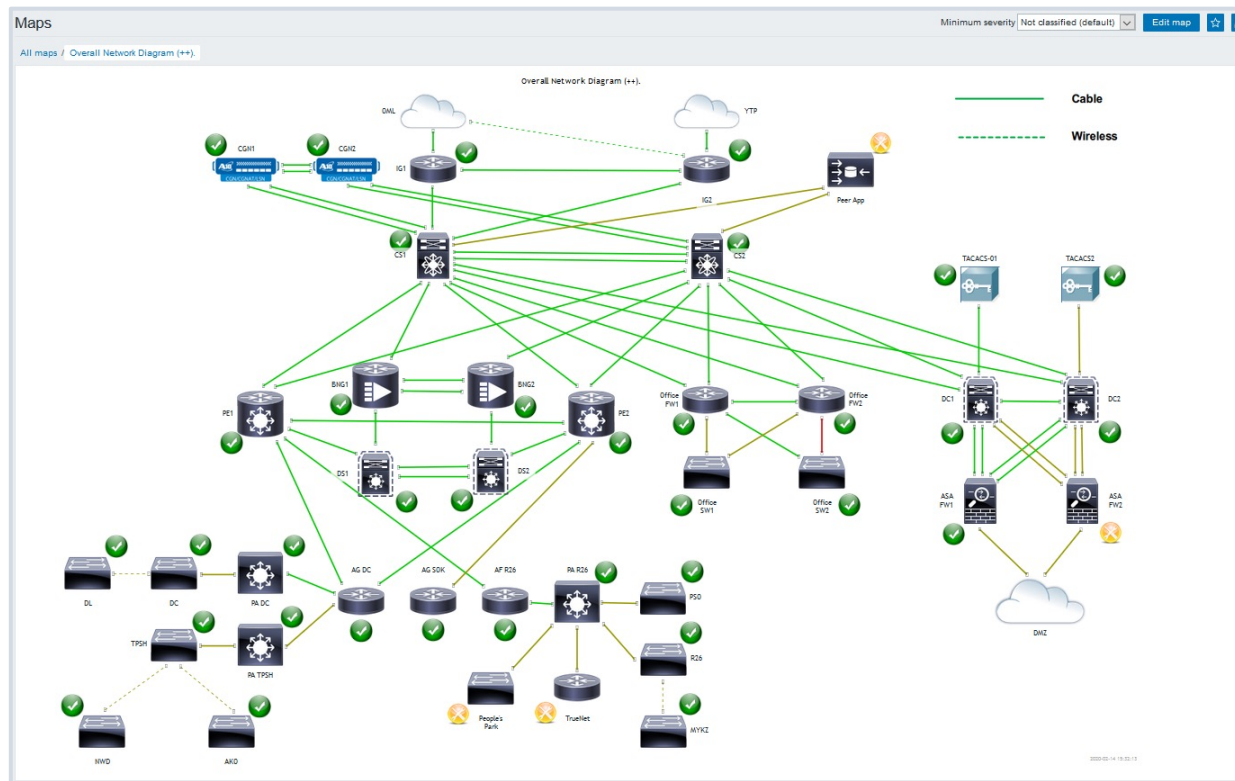
3

Maps



## Data visualization with zabbix

# MAPS



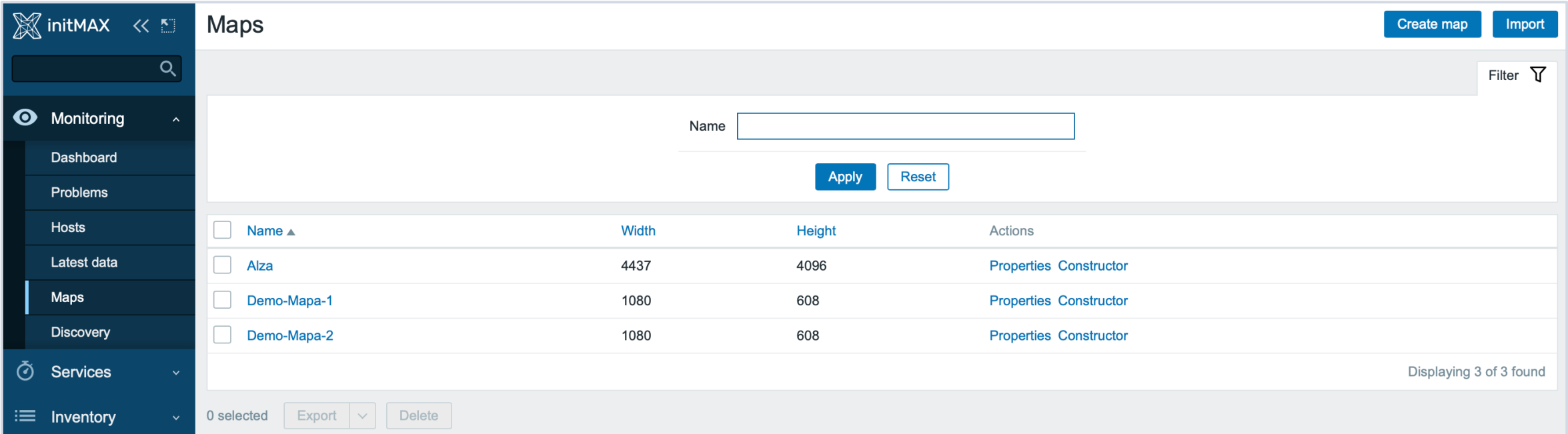
### A Map is a graphical representation of data

- ▶ Real-time data can be shown (e.g. CPU load, bandwidth, etc.)
- ▶ If some event occurs, icon status or link color on the map is changed automatically
- ▶ Access to scripts, as well as links to other pages

## Data visualization with zabbix

# MAPS

- › Configuration for the entities is available under Monitoring
- › All users in Zabbix (including non-admin users) can create network maps



The screenshot shows the Zabbix web interface for managing network maps. On the left is a dark sidebar with navigation options: Monitoring (selected), Dashboard, Problems, Hosts, Latest data, Maps, Discovery, Services, and Inventory. The main content area is titled 'Maps' and includes a search bar, a 'Filter' button, and a 'Name' input field with 'Apply' and 'Reset' buttons. Below this is a table listing three maps: 'Alza', 'Demo-Mapa-1', and 'Demo-Mapa-2'. Each row shows a checkbox, the map name, width, height, and actions (Properties, Constructor). At the bottom, it indicates '0 selected' and provides 'Export' and 'Delete' buttons.

<input type="checkbox"/>	Name ▲	Width	Height	Actions
<input type="checkbox"/>	Alza	4437	4096	<a href="#">Properties</a> <a href="#">Constructor</a>
<input type="checkbox"/>	Demo-Mapa-1	1080	608	<a href="#">Properties</a> <a href="#">Constructor</a>
<input type="checkbox"/>	Demo-Mapa-2	1080	608	<a href="#">Properties</a> <a href="#">Constructor</a>

0 selected [Export](#) [Delete](#)

Displaying 3 of 3 found

## Data visualization with zabbix

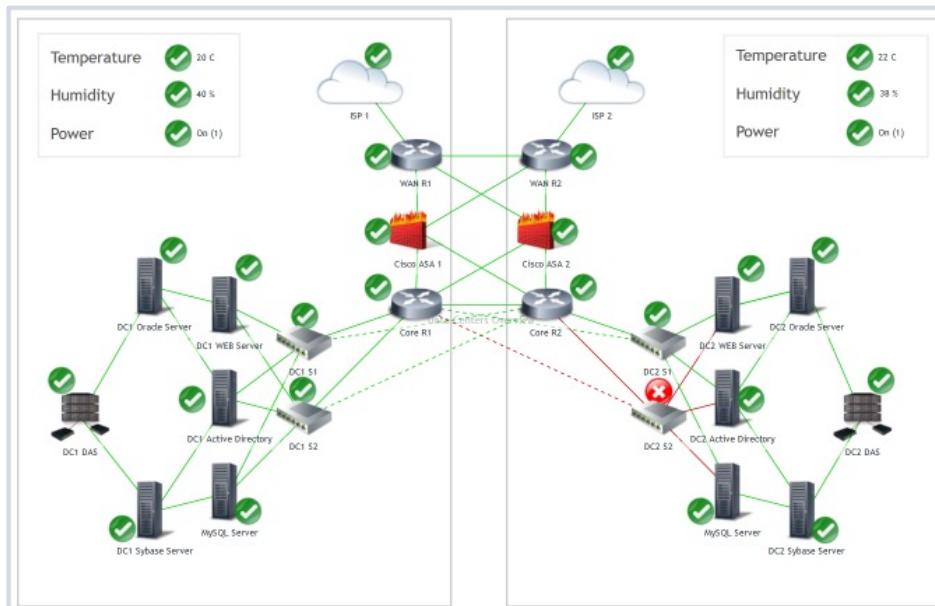
# MAPS

Map properties:

- Name, dimensions
- Background image
- Icon highlighting
- Icon label type and location
- Icon mapping
- Min. trigger severity
- URLs




Map elements:

- Image
- Trigger
- Host
- Host group
- Map
- Shape



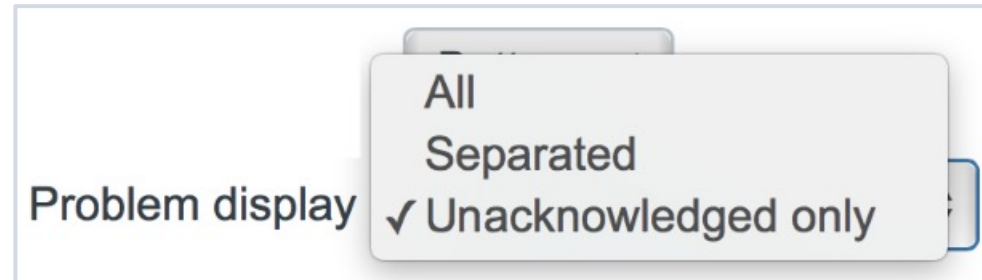


## MAPS

	None	Highlight	Mark	Don't expand	All
OK	 WIN-B5768P0N4TA OK	 WIN-B5768P0N4TA OK	 WIN-B5768P0N4TA OK	 WIN-B5768P0N4TA OK	 WIN-B5768P0N4TA OK
Disabled	 WIN-B5768P0N4TA DISABLED	 WIN-B5768P0N4TA DISABLED	 WIN-B5768P0N4TA DISABLED	 WIN-B5768P0N4TA DISABLED	 WIN-B5768P0N4TA DISABLED
Problem	 WIN-B5768P0N4TA Tomcat is Down	 WIN-B5768P0N4TA Tomcat is Down	 WIN-B5768P0N4TA Tomcat is Down	 WIN-B5768P0N4TA 1 Problem	 WIN-B5768P0N4TA 1 Problem
Recent problem	 WIN-B5768P0N4TA Tomcat is Down	 WIN-B5768P0N4TA Tomcat is Down	 WIN-B5768P0N4TA Tomcat is Down	 WIN-B5768P0N4TA 1 Problem	 WIN-B5768P0N4TA 1 Problem

Data visualization with zabbix

# MAPS - ACKNOWLEDGE Status



WIN-BS768P0N4TA  
6 Problems



WIN-BS768P0N4TA  
5 Unacknowledged



WIN-BS768P0N4TA  
6 Problems  
5 Unacknowledged

# MAPS - Icons

## Icons are used to represent map elements:

- ▶ Host - icon representing status of all triggers of the host
  - ▶ Map - icon representing status of all elements of a map
  - ▶ Trigger - icon representing status of one or more triggers
  - ▶ Host group - icon representing status of all triggers of all hosts belonging to the selected group or host group elements
  - ▶ Image - an icon, not linked to any resource
- ▶ To add an element to map user must have at least read permission
  - ▶ Map elements that user does not have read permission to are displayed with a greyed-out icon



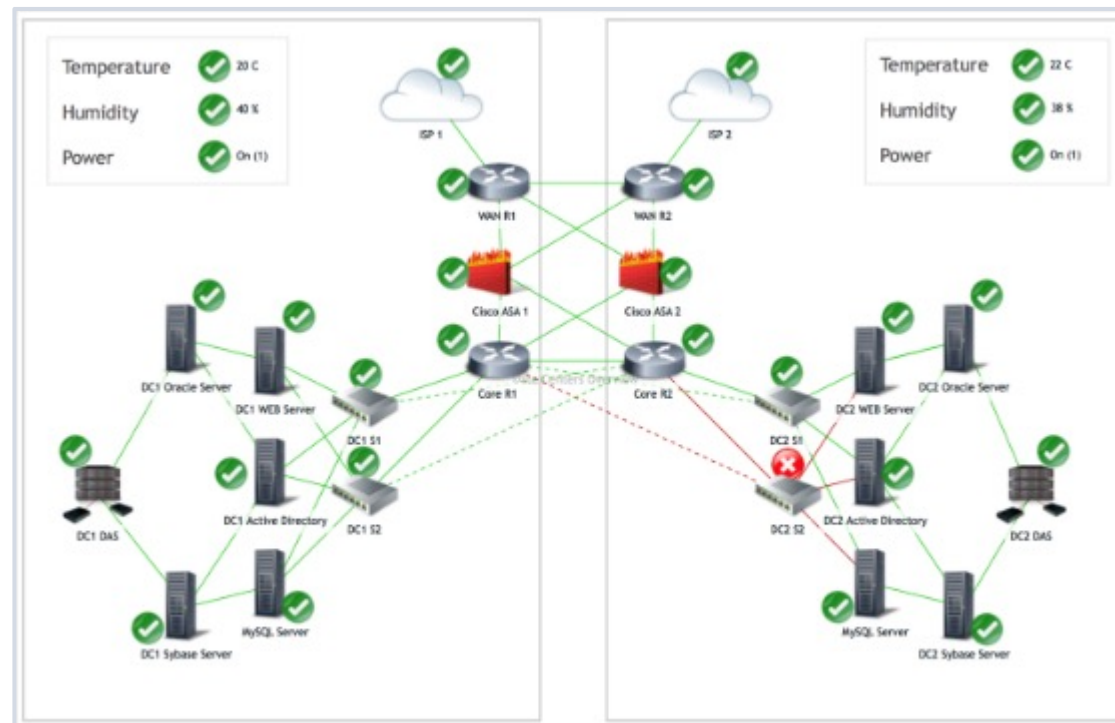


Data visualization with zabbix

# MAPS - Shapes

**In addition to icons, it is also possible to add shapes**

- ▶ Shapes are just a visual representation
- ▶ For example, a rectangle shape can be used as a background to group some hosts

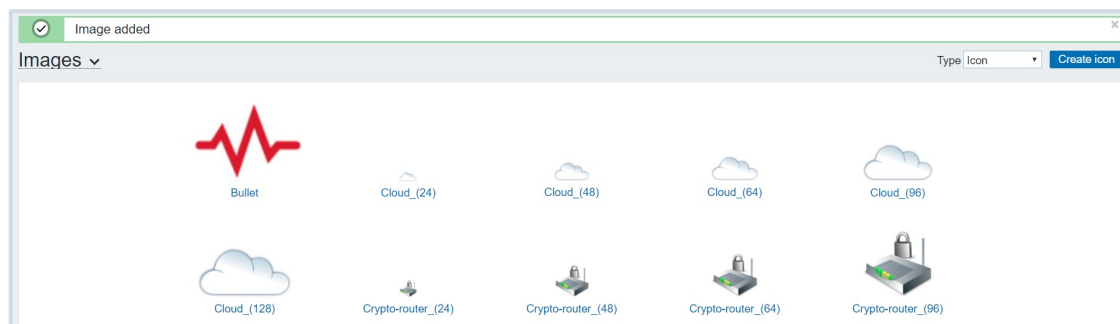


Data visualization with zabbix

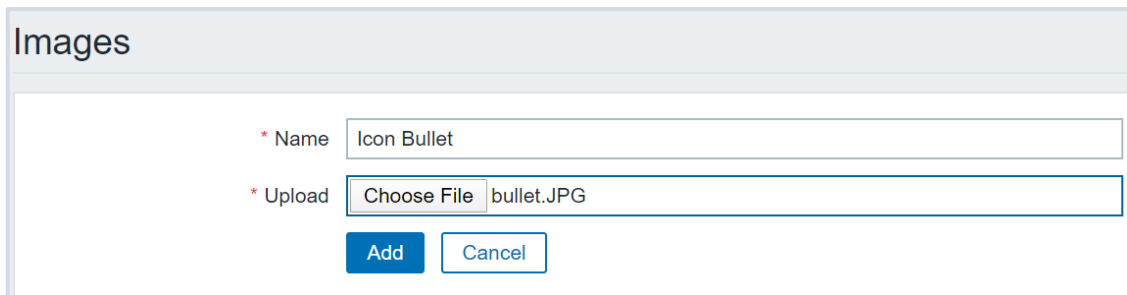
# MAPS - CUSTOM ICONS AND BACKGROUNDS

You can upload your own custom icons/backgrounds in the Administration - General - Images section!

- ▶ Select the Type of the image that you wish to upload



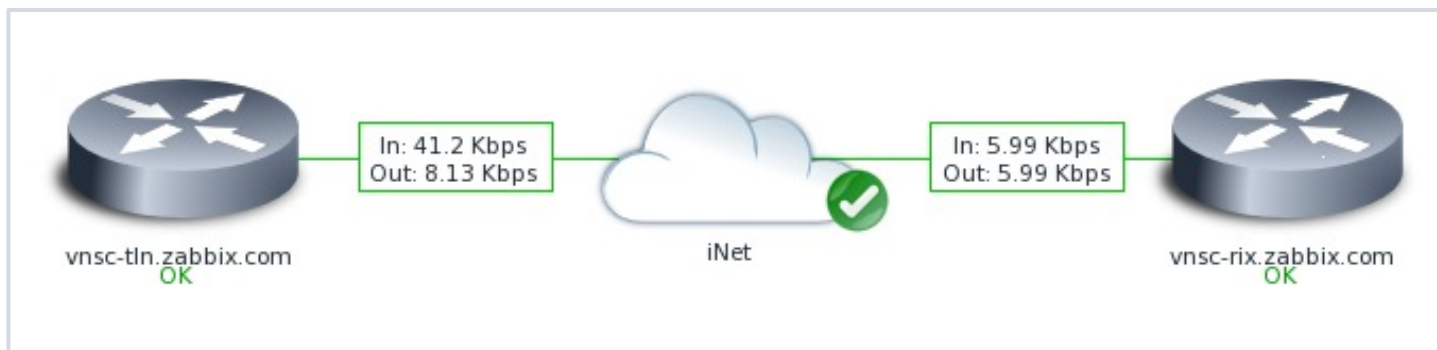
- ▶ Upload the image

A screenshot of the Zabbix Administration - General - Images section showing the upload form. The form has a title "Images" and two input fields: "\* Name" with the value "Icon Bullet" and "\* Upload" with the value "Choose File bullet.JPG". Below the fields are "Add" and "Cancel" buttons.

## Data visualization with zabbix

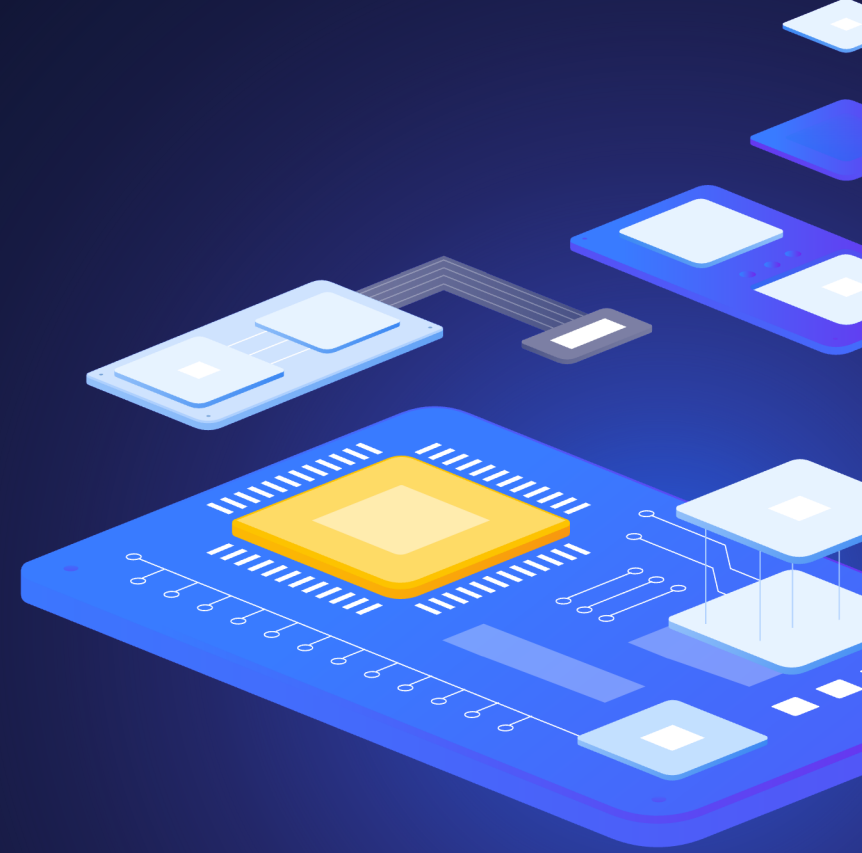
# MAPS - HINTS

- ▶ You can define map hierarchy by using submaps
- ▶ To display data on Elements or links, use map labels, ex: `{?last(/{HOST.HOST}/system.cpu.load)}` or `{?last(/WiFi/net.if.out[ifHCOutOctets.1])}`
- ▶ If links are the same color as the background, they will appear only when a problem is active!
- ▶ Use macros in URL's: `{$HOST.CONN}`, `{$HOST.IP}`, `{$HOST.DNS}`
- ▶ By default the links are a straight line - route links by using invisible icons or shapes
- ▶ Use icon mappings to assign icons to matching hosts automatically



4

Icon Mapping



# Icon Mapping

## Map elements can have different icons assigned to them

- › It is possible to map Icons to host elements automatically by using icon mapping
- › Icon mapping is based on Host inventory values
- › Icon map has to be defined in Administration – Icon mapping
- › The specific Icon map has to be selected in the map Properties section

### Maps

Name

<input type="checkbox"/> Name ▲	Width	Height	Actions
<input type="checkbox"/> Local network	680	200	<a href="#">Properties</a> <a href="#">Constructor</a>

### Network maps

Map [Sharing](#)

\* Owner

\* Name

\* Width

\* Height

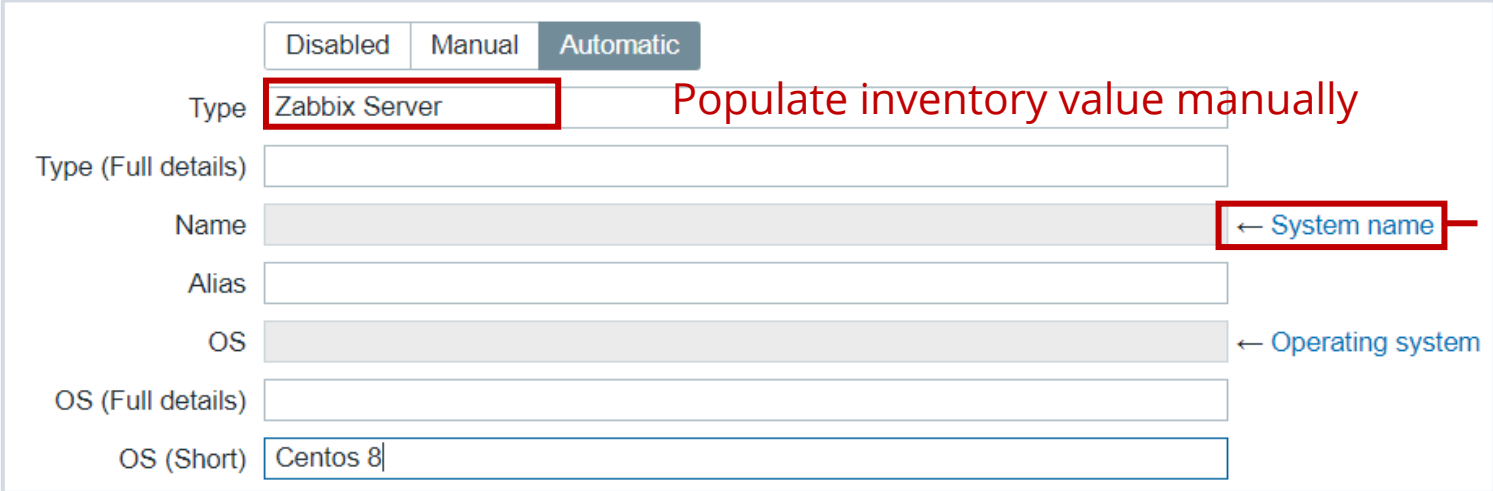
Background image

Automatic icon mapping  [show icon mappings](#)

## Data visualization with zabbix

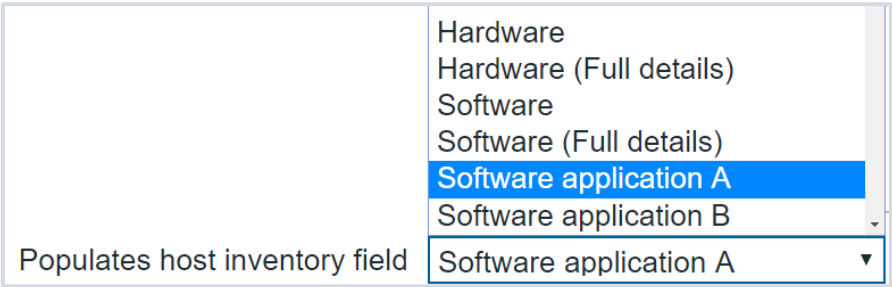
# Icon Mapping

- ▶ You can use host inventory to either populate the inventory values manually or automatically



The screenshot shows the Zabbix host configuration form with the 'Automatic' mode selected. The 'Type' field is set to 'Zabbix Server' and is highlighted with a red box, with a red arrow pointing to it from the text 'Populate inventory value manually'. The 'Name' field is highlighted with a red box, with a red arrow pointing to it from the text 'Populate inventory value from item'. The 'OS' field is highlighted with a red box, with a red arrow pointing to it from the text '← Operating system'. The 'OS (Short)' field contains the text 'Centos 8'.

- ▶ In Automatic mode, the inventory values are obtained from any item on the host






The screenshot shows the 'Populates host inventory field' dropdown menu. The menu is open, showing a list of options: Hardware, Hardware (Full details), Software, Software (Full details), Software application A (highlighted in blue), Software application B, and Software application A. The dropdown arrow is pointing to the right.

# Icon Mapping

## ► Create the Icon map

\* Name

\* Mappings

	Inventory field	Expression	Icon	Action
1:	Type	Linux Server	Server (64)	 <a href="#">Remove</a>
2:	Type	Windows Host	Notebook (64)	 <a href="#">Remove</a>
3:	Type	Zabbix Host	Workstation (64)	 <a href="#">Remove</a>

## ► Assign the icon map to your map

## ► Select “Automatic icon selection” on your host element

Automatic icon selection

Icons

Default	<input type="text" value="Zabbix server 3D (128)"/>
Problem	<input type="text" value="Default"/>
Maintenance	<input type="text" value="Default"/>
Disabled	<input type="text" value="Default"/>

## ► If the “Automatic icon selection” is greyed out, make sure that the icon map is assigned in the map properties section!

# 5

## Dashboards and Widgets





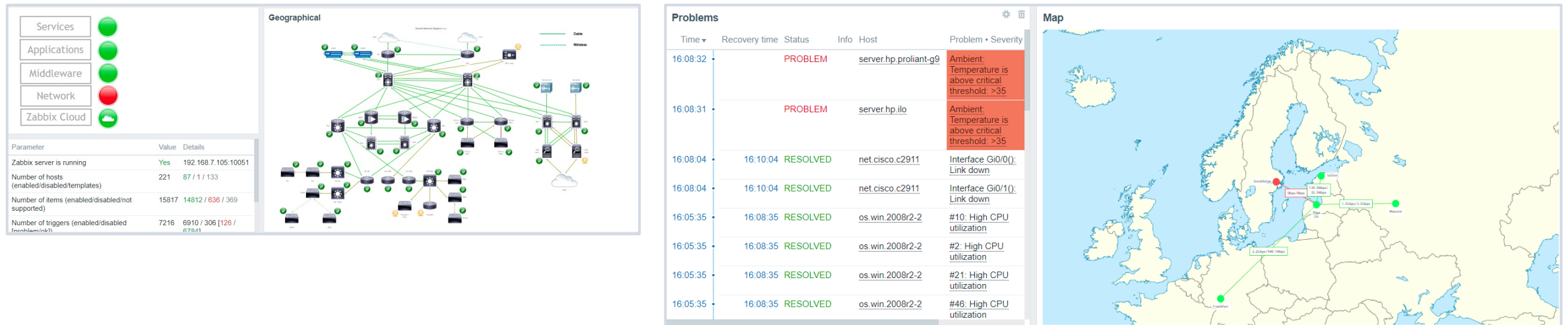
## Data visualization with zabbix

# Dashboards

### Zabbix Dashboard is your central points of monitoring.

You can have a wide variety of different dashboards for different user groups:

- ▶ A dashboard for your networking team
- ▶ An infrastructure overview dashboard based on your Zabbix maps
- ▶ A dashboard displaying live statistics of your business, e.g: website traffic
- ▶ And much, much more!



The screenshot displays a Zabbix dashboard with four main sections:

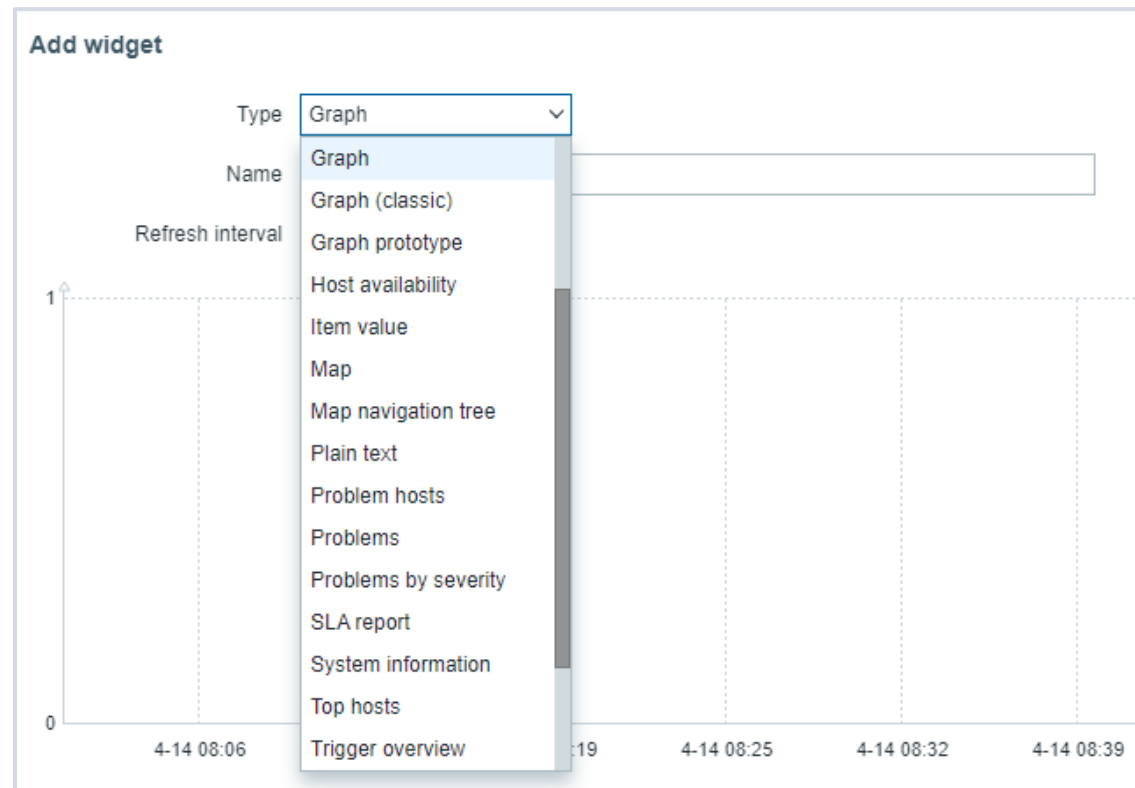
- Services:** A vertical list of service categories with status indicators:
  - Services: ●
  - Applications: ●
  - Middleware: ●
  - Network: ●
  - Zabbix Cloud: ●
- Geographical:** A network topology map showing various hosts and their interconnections.
- Problems:** A table listing recent issues:
 

Time	Recovery time	Status	Info	Host	Problem • Severity
16:08:32		PROBLEM		server.hp.proliant-g9	Ambient Temperature is above critical threshold: >35
16:08:31		PROBLEM		server.hp.ilo	Ambient Temperature is above critical threshold: >35
16:08:04	16:10:04	RESOLVED		net.cisco.c2911	Interface Gi0/0(): Link down
16:08:04	16:10:04	RESOLVED		net.cisco.c2911	Interface Gi0/1(): Link down
16:05:35	16:08:35	RESOLVED		os.win.2008r2-2	#10: High CPU utilization
16:05:35	16:08:35	RESOLVED		os.win.2008r2-2	#2: High CPU utilization
16:05:35	16:08:35	RESOLVED		os.win.2008r2-2	#21: High CPU utilization
16:05:35	16:08:35	RESOLVED		os.win.2008r2-2	#46: High CPU utilization
- Map:** A geographical map of Europe with several host locations marked by colored dots and labels.

# Widgets

## Dashboards consist of widgets.

- › Widgets can represent data related to wide variety of different Zabbix elements, for example:
- › Graphs
- › Problems
- › Maps
- › Latest data
- › External sites
- › ....



# Widgets

**Most of the widgets can be filtered by hosts, host groups, items, triggers and customized in other ways:**

**Edit widget**

Type:  Show header

Name:

Refresh interval:

Show:

Host groups:    
type here to search

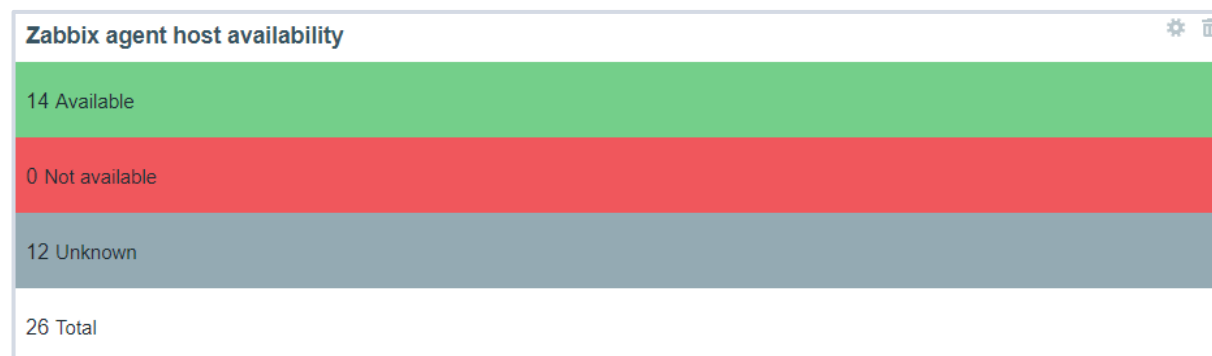
Exclude host groups:

Hosts:

Problem:

Severity:  Not classified  
 Information  
 Warning  
 Average  
 High  
 Disaster

Tags:



## Widgets

**Some widgets are interactive. For example, you can use a Map navigation tree widget to switch between maps:**

### Maps Tree

All dashboards / Maps Tree

#### Map navigation tree

- Europe 1 1 2
- Overall Network Diagram (++)
- Network (+)
- Data Centers Overview (+) 1 1 2
- SF\_net (++)
- Vn Industrial CCTV (++)

#### Map

Temperature 72F

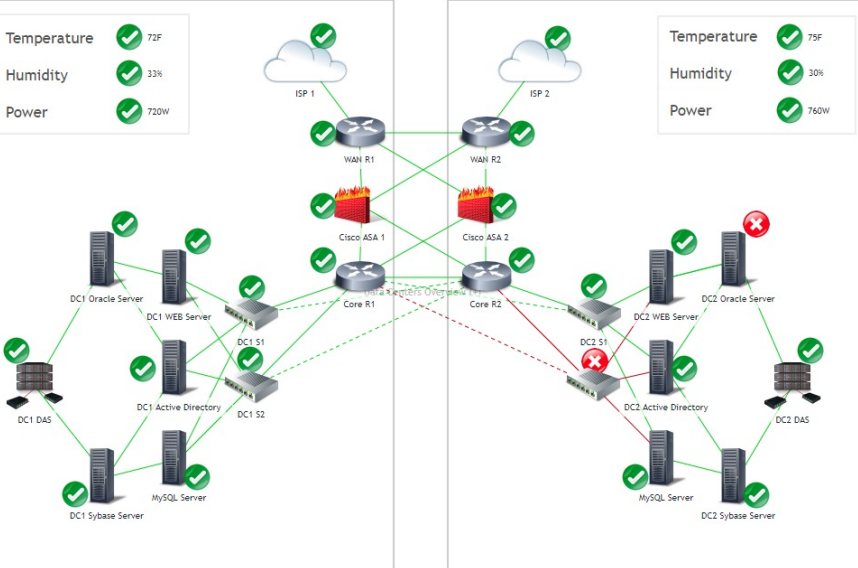
Humidity 33%

Power 720W

Temperature 75F

Humidity 30%

Power 760W



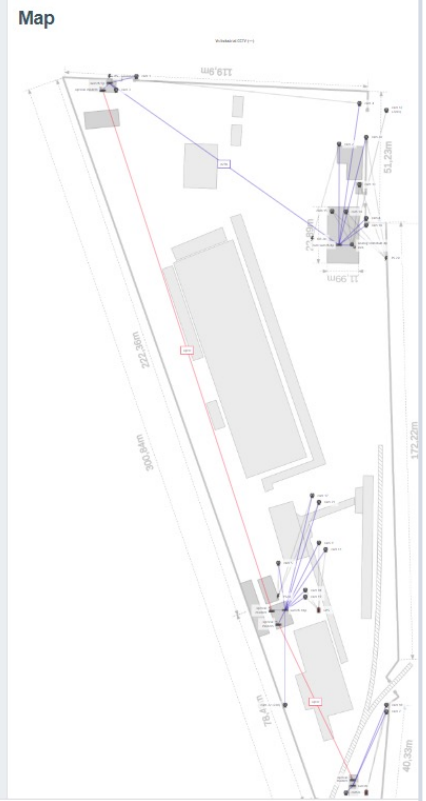
### Maps Tree

All dashboards / Maps Tree

#### Map navigation tree

- Europe 1 1 2
- Overall Network Diagram (++)
- Network (+)
- Data Centers Overview (+) 1 1 2
- SF\_net (++)
- Vn Industrial CCTV (++)

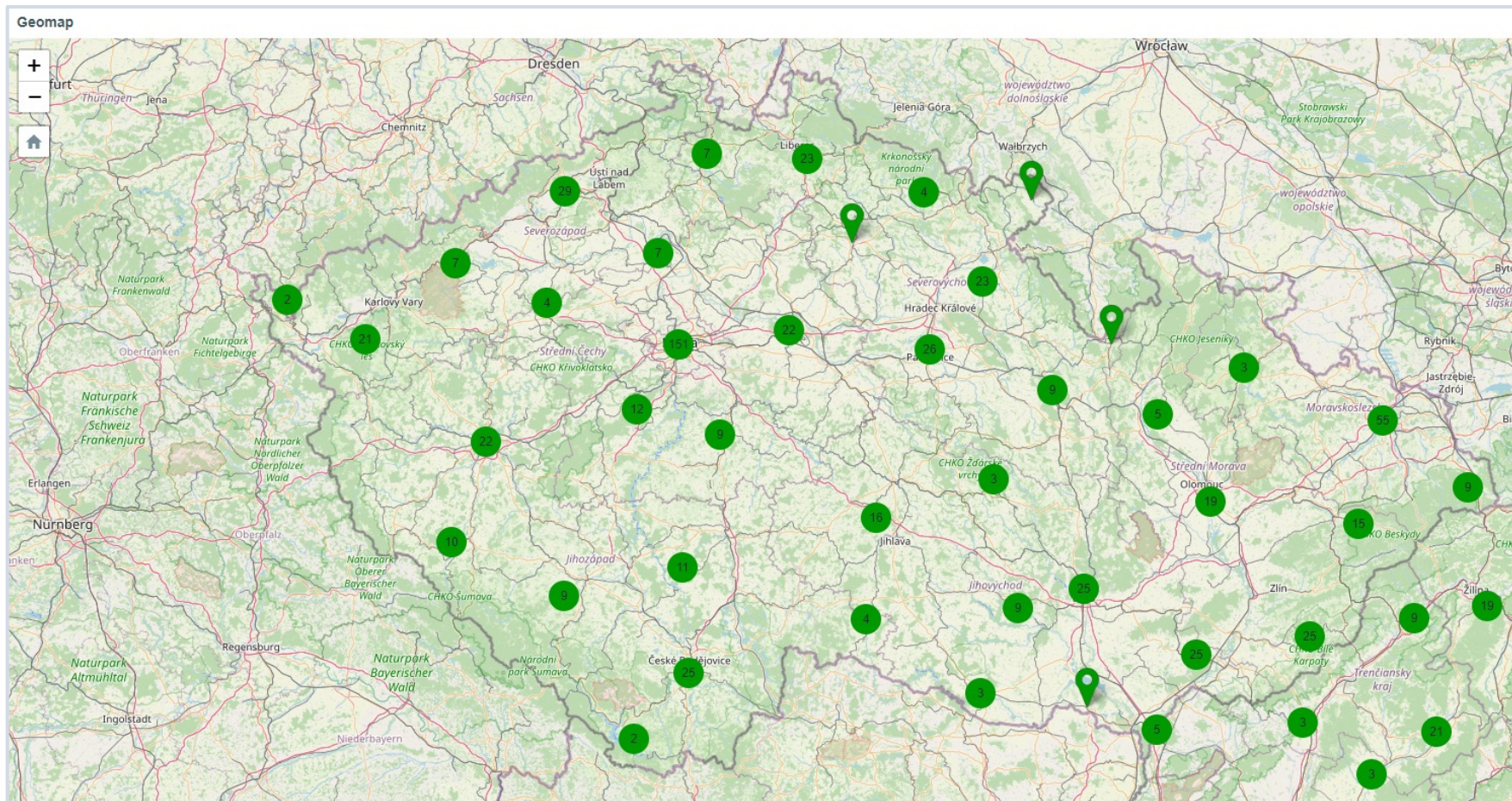
#### Map



Data visualization with zabbix

# Widgets - Geomap










The Geomap widget allows you to display your hosts and problems on a geographical map















## Data visualization with zabbix

# Widgets – Top Hosts

The Top hosts widget can be used to display a list of Top N or Bottom N hosts sorted by an item value

Host Name	CPU	Available MEM	disk /	MEM Util%	Agent			
Rocky01	1.4792 %		14.7753 %		19.7533 %		85.2247 %	Up (1)
RockyDB	0.651 %		67.6285 %		27.1268 %		32.3715 %	Up (1)
Rocky02	0.09176 %		73.0975 %		17.9863 %		26.9026 %	Up (1)

Host	CPU	CPU BAR	MEM	Disk /	Zabbix Agent		
Server_0009.DEMO	21.1398 %		21.1398 %		32.1901 %		25.916 %
Server_0002.DEMO	20.9575 %		20.9575 %		32.24 %		25.916 %
Server_0007.DEMO	20.834 %		20.834 %		32.1861 %		25.916 %
Server_0004.DEMO	20.4971 %		20.4971 %		32.1869 %		25.916 %

**Edit widget** ✕

Type: Top hosts Show header

Name:

Refresh interval: Default (1 minute)

Host groups: Zabbix servers ✕ Select

Hosts:  Select

Host tags: And/Or Or

Contains  Remove

[Add](#)

Name	Data	Action
Host Name	Host name	<a href="#">Edit</a> <a href="#">Remove</a>
CPU	CPU user time	<a href="#">Edit</a> <a href="#">Remove</a>
Available MEM	Available memory in %	<a href="#">Edit</a> <a href="#">Remove</a>
disk /	/: Space utilization	<a href="#">Edit</a> <a href="#">Remove</a>
MEM Util%	Memory utilization	<a href="#">Edit</a> <a href="#">Remove</a>
Agent	Zabbix agent ping	<a href="#">Edit</a> <a href="#">Remove</a>

[Add](#)

Order: Top N Bottom N

\* Order column: MEM Util%

\* Host count:

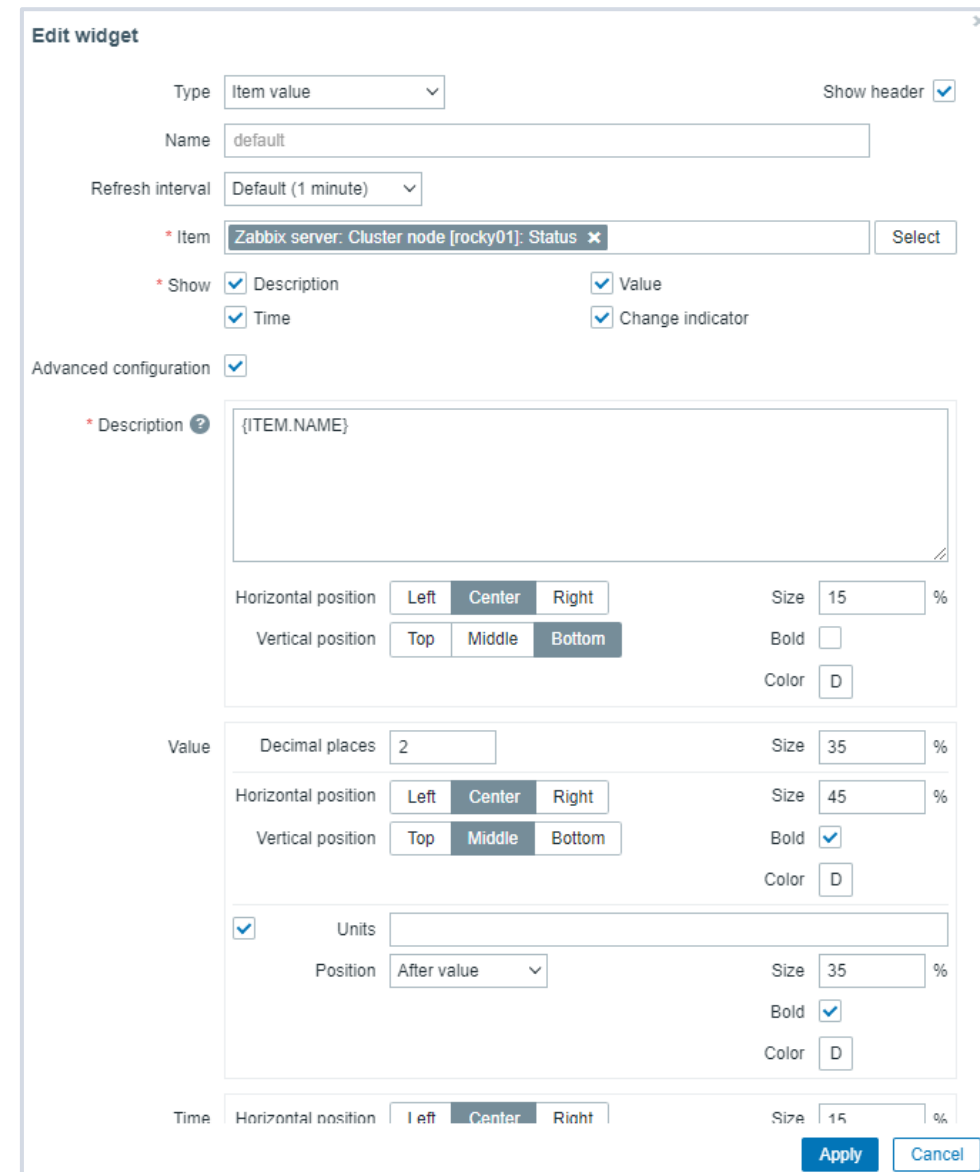
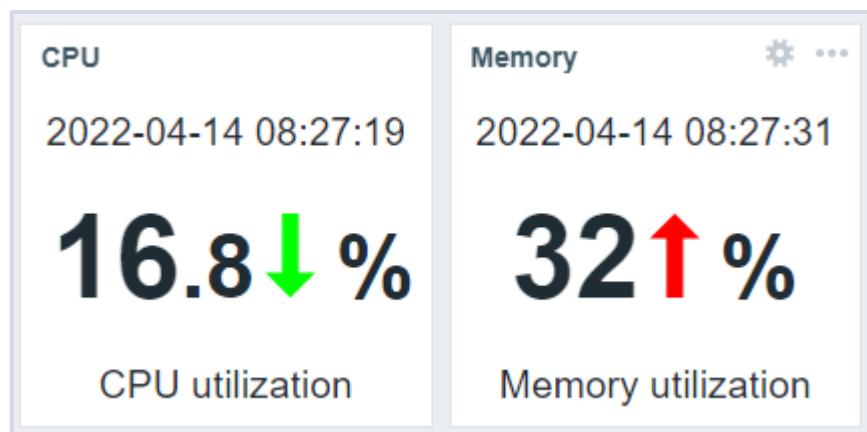
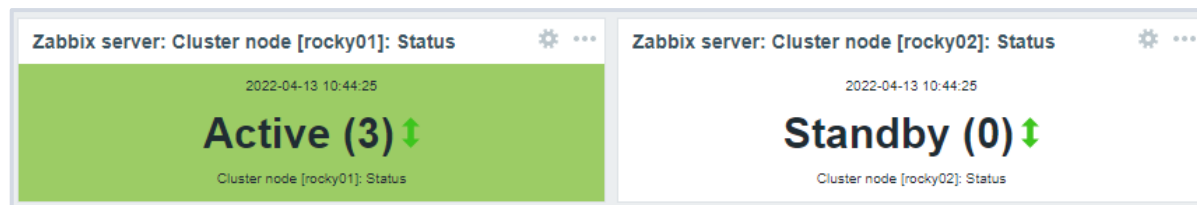
Apply Cancel

## Data visualization with zabbix

# Widgets – Item value

**The single item widget allows you to display values for a single metric**

- ▶ Can be used in template dashboard



The "Edit widget" configuration window in Zabbix. It shows the following settings:

- Type: Item value (dropdown)
- Show header:
- Name: default (text input)
- Refresh interval: Default (1 minute) (dropdown)
- \* Item: Zabbix server: Cluster node [rocky01]: Status (dropdown with 'x' icon) and a "Select" button.
- \* Show:  Description,  Value,  Time,  Change indicator.
- Advanced configuration:
- \* Description: `{ITEM.NAME}` (text area)
- Horizontal position: Left, Center (selected), Right (radio buttons)
- Vertical position: Top, Middle, Bottom (radio buttons)
- Size: 15 % (text input)
- Bold:
- Color: D (text input)
- Value: Decimal places: 2 (text input)
- Size: 35 % (text input)
- Horizontal position: Left, Center (selected), Right (radio buttons)
- Vertical position: Top, Middle (selected), Bottom (radio buttons)
- Bold:
- Color: D (text input)
- Units: (text input)
- Position: After value (dropdown)
- Size: 35 % (text input)
- Bold:
- Color: D (text input)
- Time: Horizontal position: Left, Center (selected), Right (radio buttons)
- Size: 15 % (text input)

Buttons: Apply, Cancel

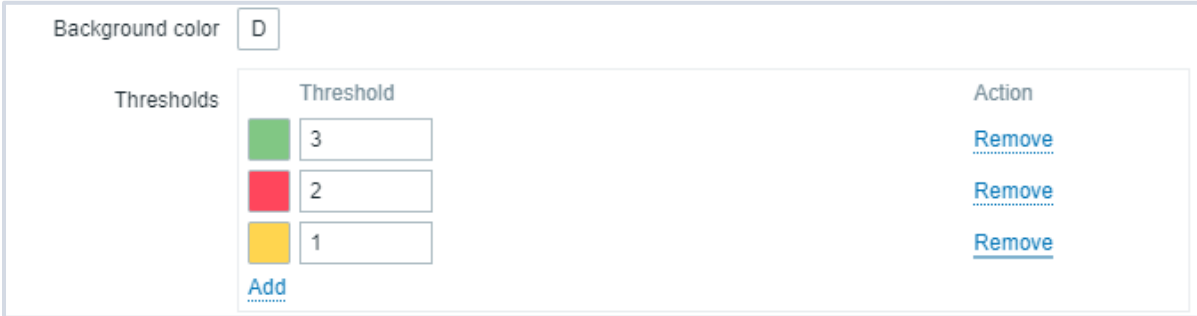
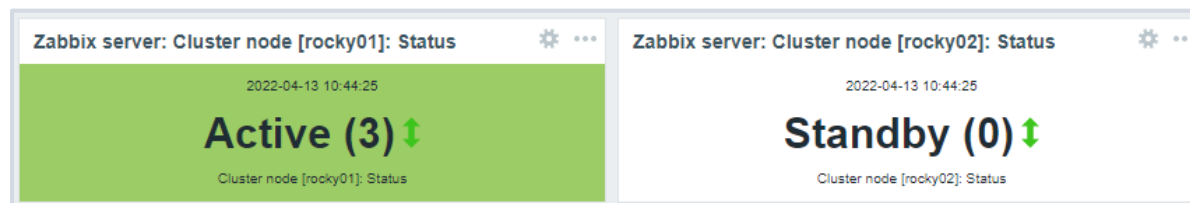
# Widgets – 6.4

## New Menu Layout

- › New sections and structure

## Widgets development

- › Widgets as modules
- › Item value improvement – color thresholds



The figure shows the configuration interface for a Zabbix widget. It includes a "Background color" dropdown menu set to "D". Below it is a "Thresholds" section with a table of three rows. Each row has a colored square (green, red, yellow) next to a "Threshold" input field (containing 3, 2, and 1 respectively) and a "Remove" link. An "Add" link is located at the bottom of the table.

Threshold	Action
<input type="text" value="3"/>	<a href="#">Remove</a>
<input type="text" value="2"/>	<a href="#">Remove</a>
<input type="text" value="1"/>	<a href="#">Remove</a>

[Add](#)



# Widgets – 7.0

## Advanced visualization and reporting

- Ability to use all type of widgets for dashboard templates **Ready**  
[ZBXNEXT-8086](#)
- New filtering options for the Top100 triggers report **Ready**  
Add ability to filter by tags, trigger name, and other criteria  
[ZBXNEXT-6974](#)
- Quick navigation between host dashboards **Ready**  
One-click navigation between host dashboards  
[ZBXNEXT-8421](#)
- Quick navigation between global dashboards **In design**  
One-click navigation between global dashboards
- New sorting options for Top hosts widget **Ready**  
[ZBXNEXT-7687](#)
- Communication framework for widgets **Ready**  
Widgets will be able to talk to each other enabling creation of new types of widgets and dynamic next-generation dashboards  
[ZBXNEXT-8145](#)
- Capacity planning reports **In dev**  
Support of absolute time periods for Top hosts and Item value widgets  
[ZBXNEXT-8496](#)

## New widgets for dashboards and reporting

- Gauge chart widget **Ready**  
[ZBXNEXT-743](#) ★ Top voted!
- Top100 triggers widget **Ready**  
[ZBXNEXT-6973](#)
- Pie and donut chart widget **Ready**  
[ZBXNEXT-8331](#)
- Host tree navigation widget **In design**  
[ZBXNEXT-8685](#)
- Item tree navigation widget **In design**  
[ZBXNEXT-8686](#)
- Honeycomb items widget **In dev**  
[ZBXNEXT-8683](#)
- Honeycomb hosts widget **In design**
- TopN item widget  
Displaying data table view for items from a single of multiple hosts, also for LLD items  
[ZBXNEXT-4036](#)

# Inter Widget communication

Communication framework for widgets

- ▶ Dashboard widgets can now connect and communicate with each other, making widgets and dashboards more dynamic.

▼ Advanced configuration

Override host  Select ▼

Apply Cancel

## Data visualization with zabbix

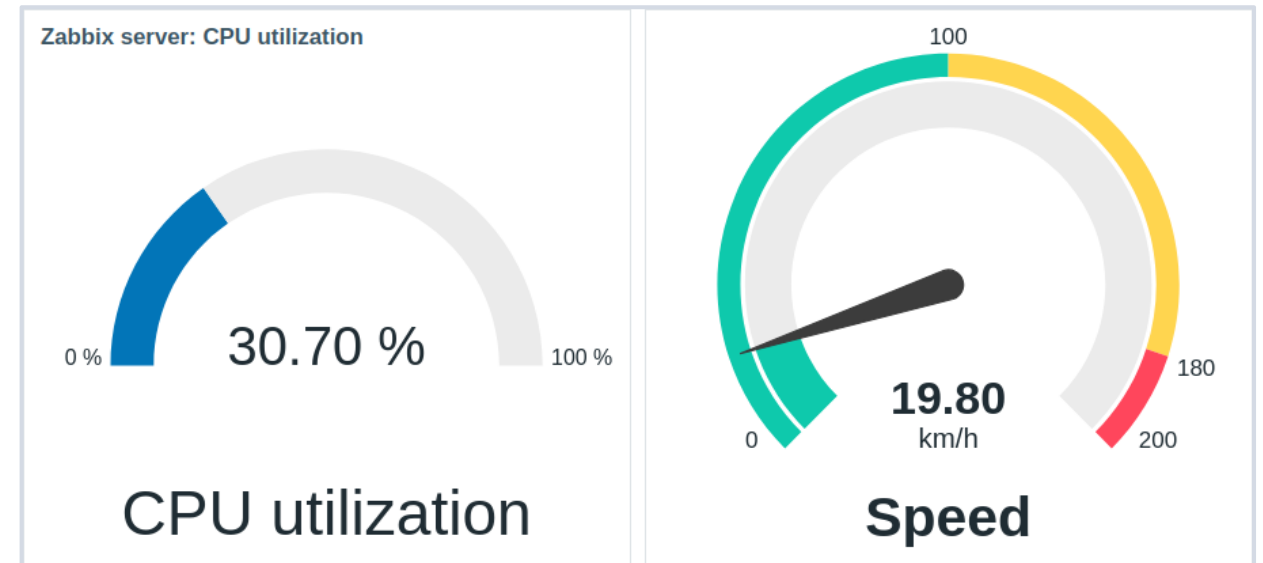
# Gauge

The gauge widget displays the value of a single item as a gauge.

When configured, the widget can consist of the following elements:

- › Item description
- › Item value
- › Item value units
- › Gauge scale
- › Gauge arc
- › Gauge needle

The widget can be visually fine-tuned using the advanced configuration options to create a wide variety of visual styles.

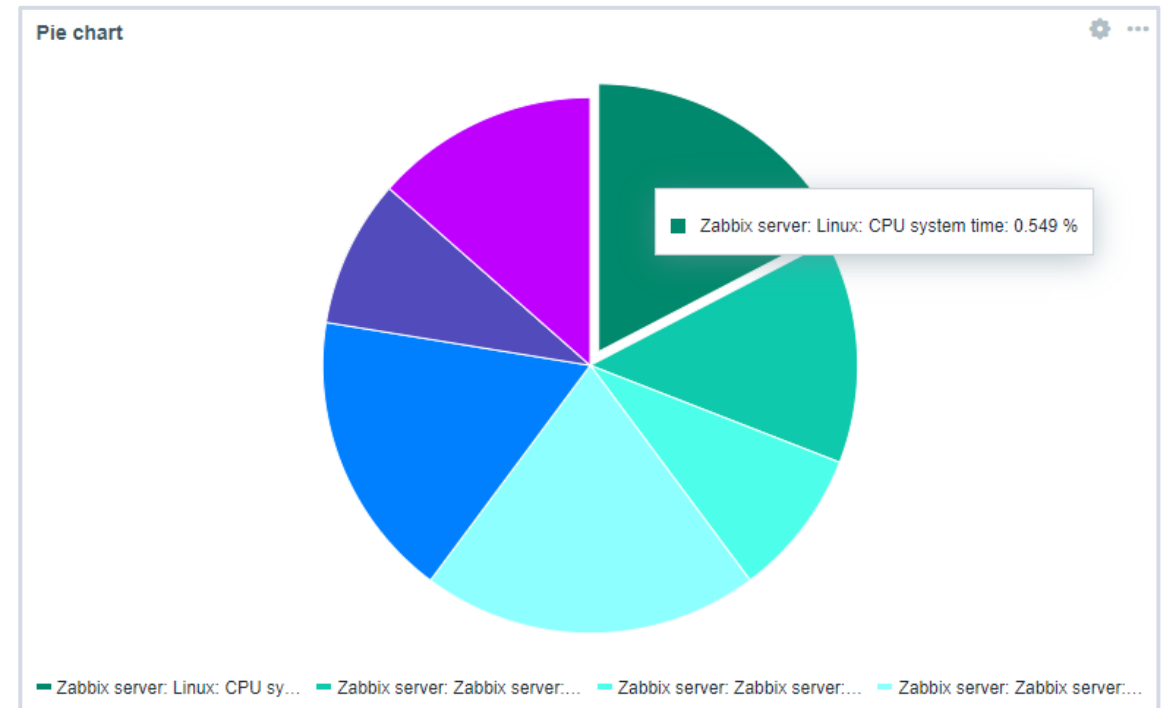
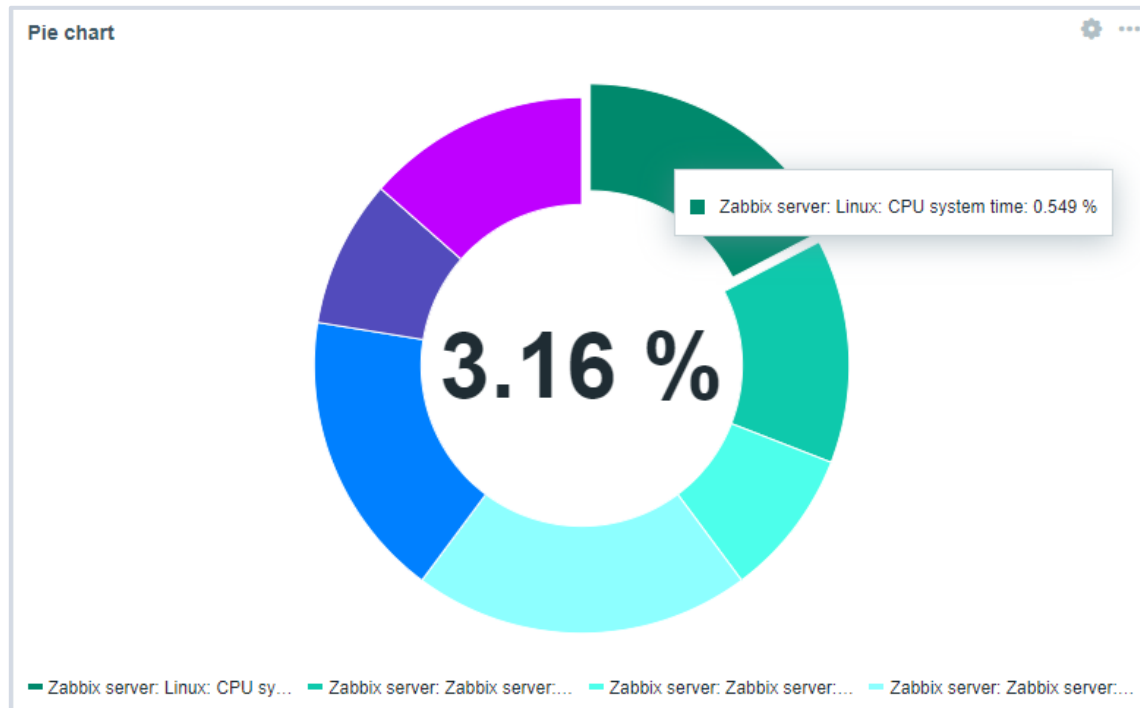


## Data visualization with zabbix

# Pie chart

The pie chart widget allows to display values of selected items as a pie or doughnut chart.

- ▶ On mouseover, the focused sector pops out and the legend for this sector is displayed. Clicking on the focused sector makes the pop-out effect permanent, until closed with "x".

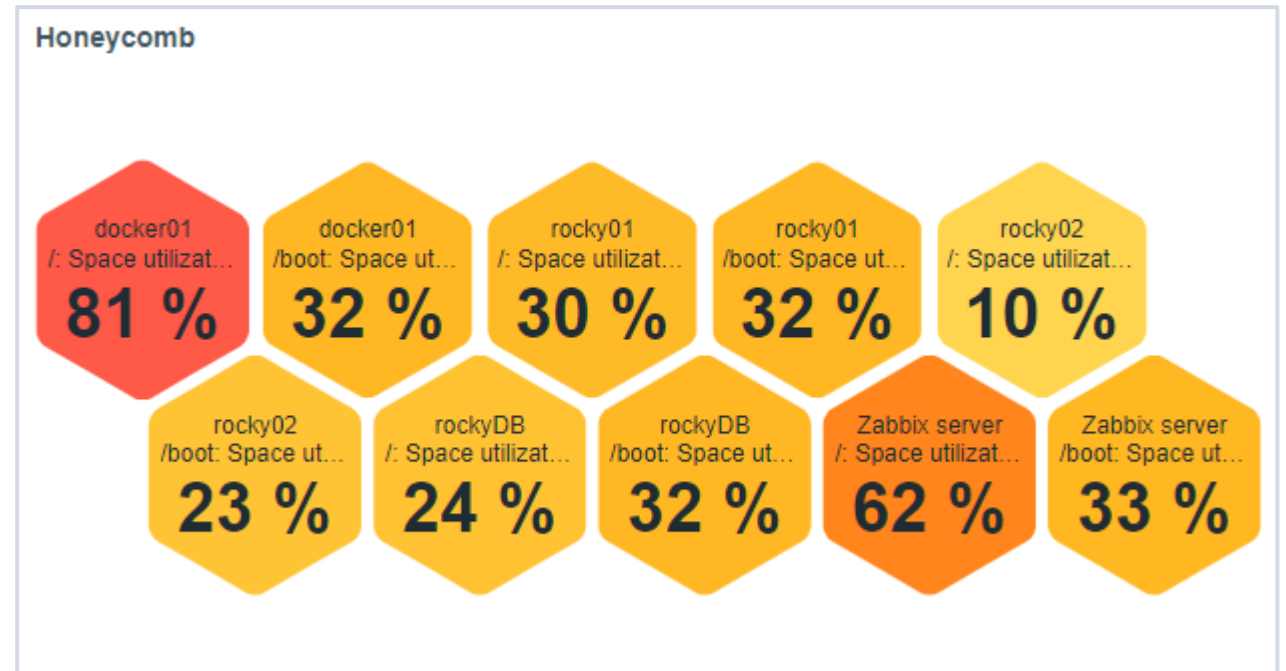


# Honeycomb

The gauge widget displays the value of a single item as a gauge.

- ▶ Host view
- ▶ Item view

Used for inter widget communication.



# Top Triggers

In the Top triggers widget, you can see the triggers with the highest number of problems.

- ▶ The maximum number of triggers that can be shown is 100. When viewing the widget on a dashboard, it is possible to select the time period for displaying the data.
- ▶ The information on top triggers is also available in the Reports → Top 100 triggers menu section.

Top triggers			
Host	Trigger	Severity	Number of problems
<a href="#">Zabbix server</a>	<a href="#">/: Disk space is low</a>	Warning	4
<a href="#">rocky02</a>	<a href="#">Linux: Zabbix agent is not available</a>	Average	1
<a href="#">docker01</a>	<a href="#">/: Disk space is low</a>	Warning	1
<a href="#">Zabbix server</a>	<a href="#">/boot: Disk space is low</a>	Warning	1
<a href="#">Zabbix server</a>	<a href="#">Linux: Number of installed packages has been changed</a>	Warning	1

# Other improvements

## Host | Item Tree navigation Widget

- ▶ Not available yet.

## Time periods for aggregation in item value/top hosts widgets

- ▶ Time periods now can be configured in the Item value and Top hosts widgets.
- ▶ It is also now possible to display an aggregated value in the item value widget for the chosen period. The aggregated value can be displayed.

## Expanded widget availability on template dashboards

- ▶ Previously, on a template dashboard, you could create only the following widgets: Clock, Graph (classic), Graph prototype, Item value, Plain text, URL.
- ▶ Now template dashboards support the creation of all widgets.

# Other improvements

## Extended sorting in Top hosts widget

- ▶ Now, besides sorting by Item value, it is also possible to set Host name or Text column as the order column in Top hosts widget.

## The Override host parameter

- ▶ Setting a data source containing a host for which the widget can display data.
- ▶ The Time period parameter is used to set a data source containing a time period for which the widget can display data.

## Increased functionality of Host availability widget

- ▶ Host availability widget now allows displaying the hosts with Zabbix agent (active checks) interface. One more availability status has been added, i.e., Mixed, which corresponds to the situation when at least one interface is unavailable and at least one is either available or unknown. Moreover, the possibility to see only the total of hosts, without breakdown by interfaces, has been introduced.



# Faster permission checks

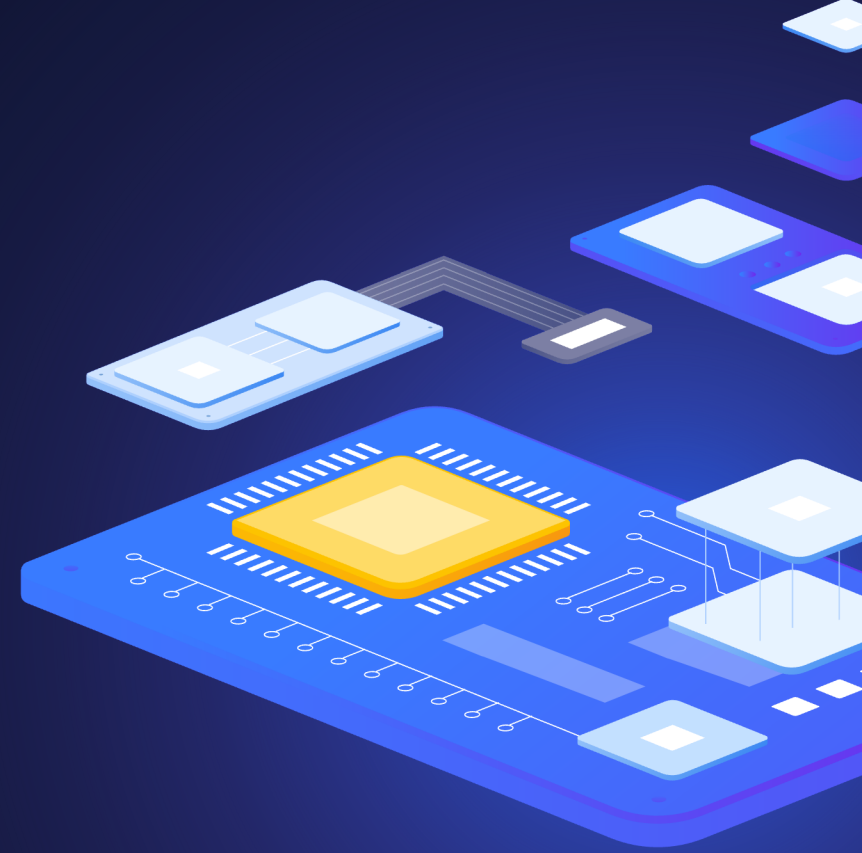
Permission checks have been made much faster by introducing several intermediary tables for checking non-privileged user permissions.

- ▶ These tables keep hashes (SHA-256) of user group sets and host group sets for each user/host respectively. Additionally, there is a permission table storing only the accessible combinations of users and hosts, specified by the hash IDs.

This improvement makes the loading of permission-heavy frontend pages (i.e. hosts, problems) much faster. Note that hashes and permissions are not calculated for Super-admin users.

6

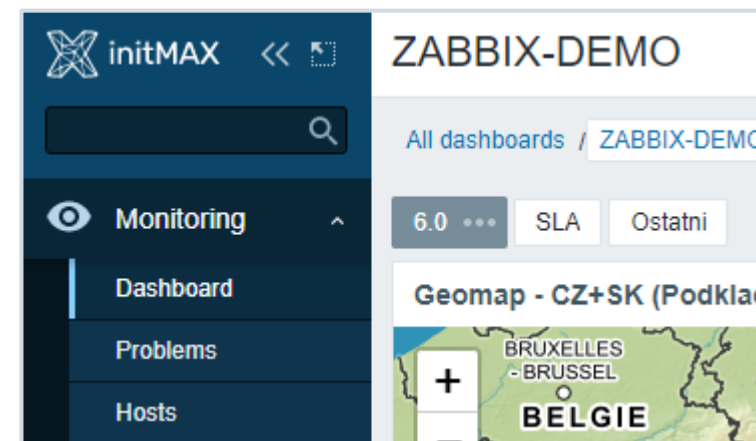
Rebranding



# Rebranding

## Customize your Zabbix instance to represent your organization.

- ▶ Replace the existing Zabbix branding and Help page URL with your own organization branding and a custom website URL.
- ▶ The rebranding feature does not violate the Zabbix license agreement - you're free to replace the Zabbix branding at your leisure!

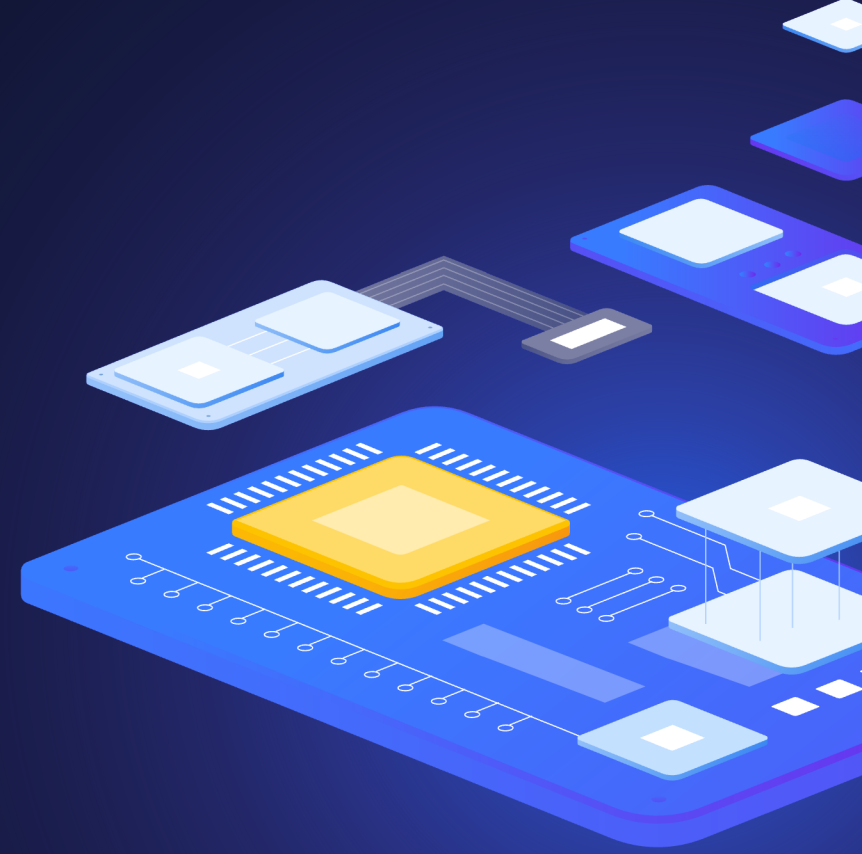


```
local/conf/brand.conf.php
```

```
<?php
return [
    'BRAND_LOGO' => './images/custom_logo.png',
    'BRAND_LOGO_SIDEBAR' => './images/custom_logo_sidebar.png',
    'BRAND_LOGO_SIDEBAR_COMPACT' => './images/custom_logo_sidebar_compact.png',
    'BRAND_FOOTER' => ',@ initMAX',
    'BRAND_HELP_URL' => 'https://www.initmax.cz/help/'
];
```

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Demonstration





Questions?



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