

ZABBIX

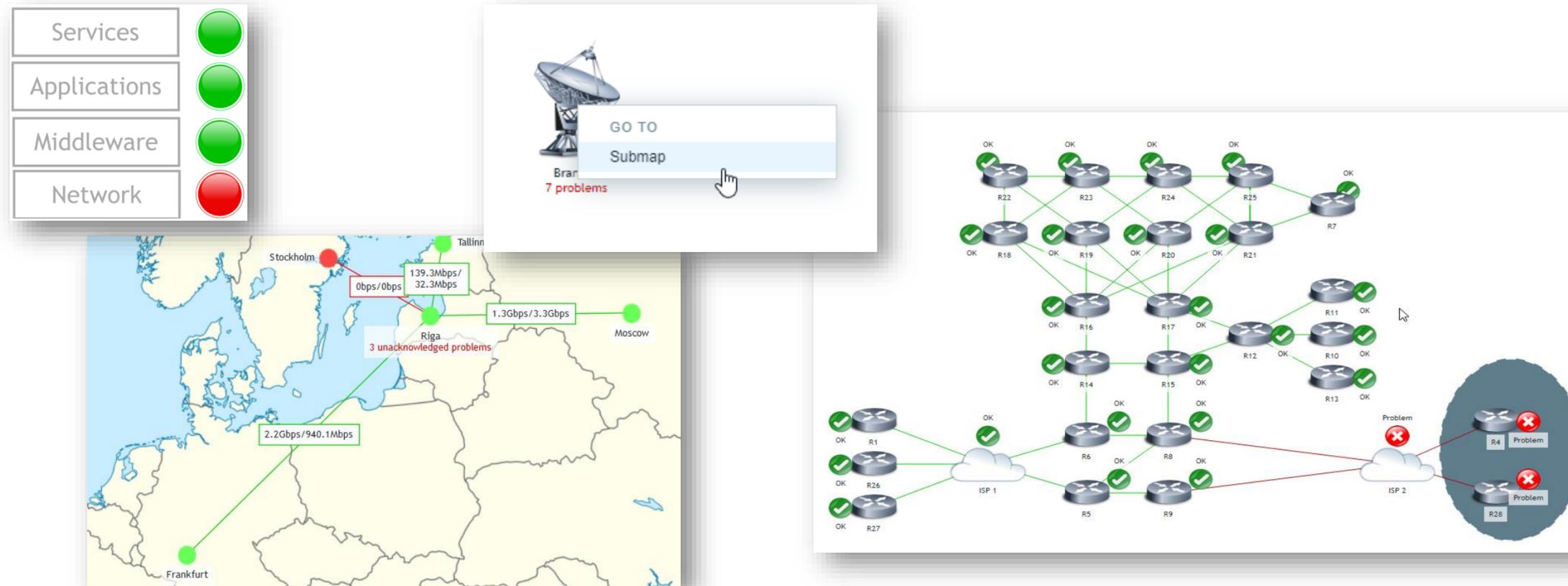
ZABBIX MAPS

KRUPORNITSKIY DMITRY
TECHNICAL SUPPORT ENGINEER

ZABBIX

MAPS?

- Graphical representation of real-time data (e.g. load, bandwidth, connectivity, etc.) – grasp the data status at once



- If an event occurs, icon status or link color on the map is changed automatically
- Access to scripts, as well as links to other pages
- Possible to create multi-level hierarchy

MAPS CREATION

Monitoring – Maps – Create map

Network maps

Map [Sharing](#)

* Owner

* Name

* Width

* Height

Background image

Automatic icon mapping [show icon mappings](#)

Icon highlight

Mark elements on trigger status change

Display problems

Advanced labels

Map element label type

Map element label location

Problem display

Minimum severity

Show suppressed problems

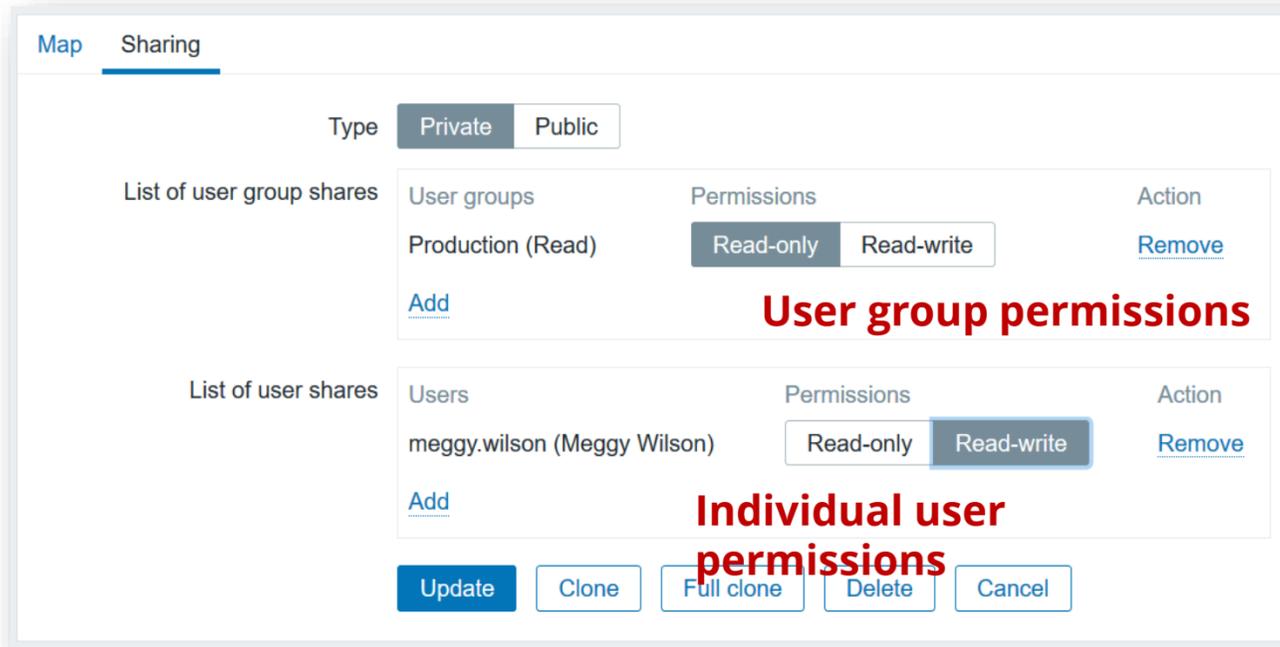
URLs		Name	URL	Element	Action
				Host	<input type="button" value="Remove"/>

[Add](#)

- Specify required (*) fields
- Think about background image (no scaling!)
- Problems? Display them!
- Do you want advanced labels?

MAPS PERMISSIONS

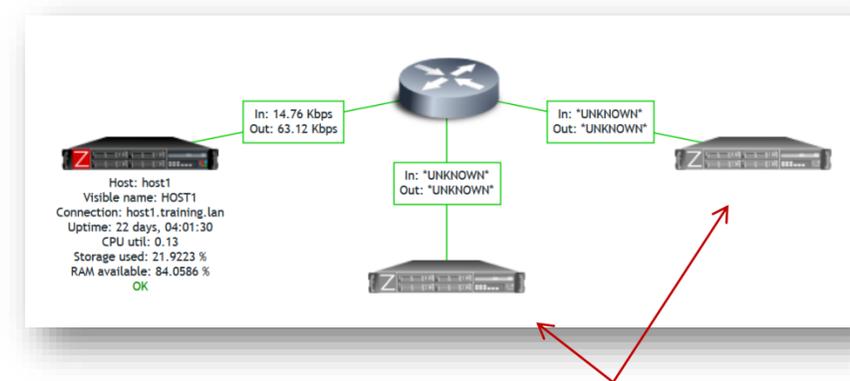
- All users are open to create their maps in Zabbix
- Owner – a user who created them
- Maps are either public or private:
 - **PUBLIC** maps are visible to all. They respect general Zabbix permissions (access to at least one map element is required). Can be edited in case user or user group has rights
 - **PRIVATE** maps are visible only to their owner and the users/user groups the map is shared with



The screenshot shows the 'Map Sharing' interface in Zabbix. It features two sections for managing permissions:

- List of user group shares:** A table with columns for 'User groups', 'Permissions', and 'Action'. One entry is 'Production (Read)' with 'Read-only' selected and 'Read-write' as an option. A red text overlay 'User group permissions' is positioned below this table.
- List of user shares:** A table with columns for 'Users', 'Permissions', and 'Action'. One entry is 'meggy.wilson (Meggy Wilson)' with 'Read-write' selected and 'Read-only' as an option. A red text overlay 'Individual user permissions' is positioned below this table.

At the bottom of the interface are buttons for 'Update', 'Clone', 'Full clone', 'Delete', and 'Cancel'. The 'Type' is currently set to 'Private'.

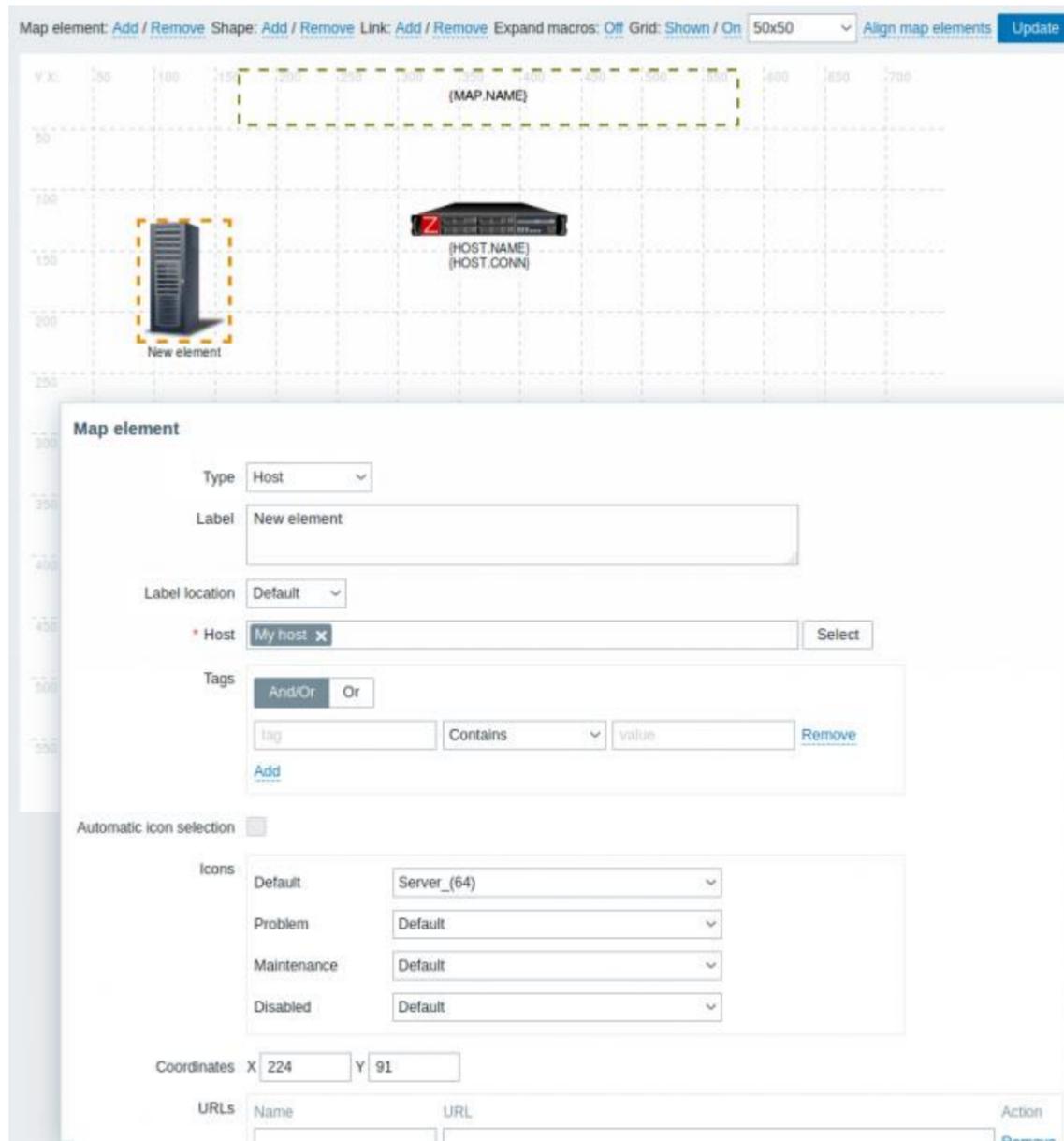


Lack of Zabbix permissions for user

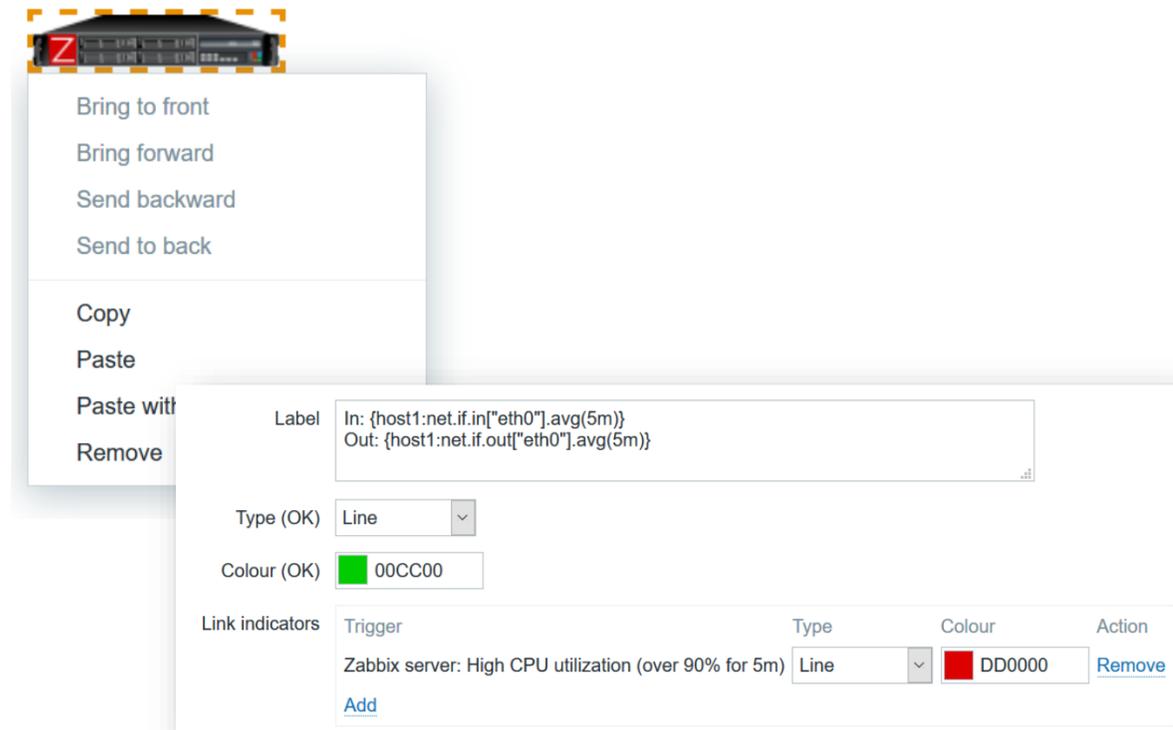
Greyed out icon and hidden textual information.

Trigger label is visible even if the user has no permissions to the trigger.

ADDING ELEMENTS



- Add or remove
 - **Elements** (host, host group, images, maps, triggers)
 - Each with its own set of properties
 - **Shapes** (rectangle, ellipse, line)
 - Customize border or background, look, layout, size and etc.
 - **Links**
 - Customize the look and the label
 - Can use triggers to change its color
- Use Icon mapping to simplify setup
 - Mouse right click opens a menu
 - You can select multiple elements (also with CTRL key)



ADDING VISUAL EFFECTS

The screenshot shows the Zabbix Maps interface with the following elements and annotations:

- Shape1 heading using macro to display maps name:** Training map: Main
- Shape2: Map elements:**
 - Map - Link to another map:** OK (Annotation: Can link to another map)
 - Just an image:** (Annotation: Can use {MACRO} in the label to show real-time data)
 - Host with macros:** Zabbix server, 127.0.0.1, 21 days, 23:47:17, 0.14. High swap space usage (less than 50% free) (Annotation: Can show the state of the host group)
 - Host group:** Training/Servers. CPU Load is very high on Training-VM-XX, 2 problems (Annotation: Can show the state of the trigger)
 - Trigger:** All triggers for Zabbix Server. High swap space usage (less than 50% free)

2020-05-07 17:00:46

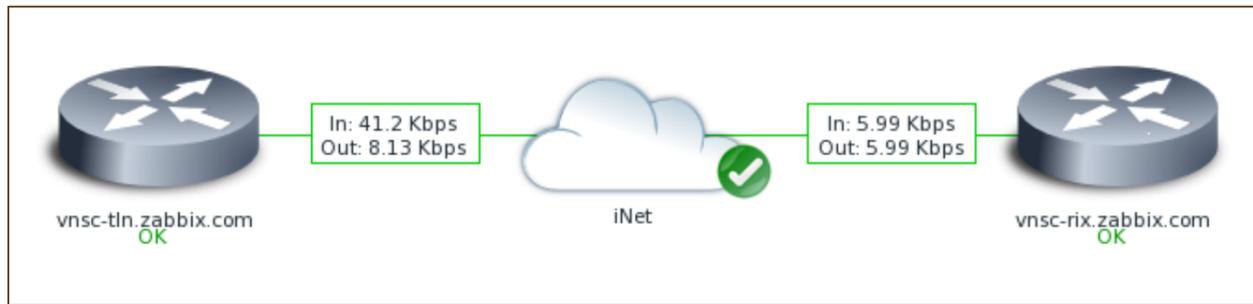
Can link to another map

Can use {MACRO} in the label to show real-time data

Can show the state of the host group

Can show the state of the trigger

ADDING CONNECTIONS AND LINKS



- You may create a link between two elements, specify its attributes (labels, colors, coordinates, etc.)
- The `{host:key.func(param)}` macro is supported in this field, but only with **avg**, **last**, **min** and **max** trigger functions, with *seconds* as parameter.

Map element

Type: Host

Label: Host: {HOST.HOST}
 Visible name: {HOST.NAME}
 Connection: {HOST.CONN}
 Uptime: {host1:system.uptime.last()}
 CPU util: {{HOST.HOST}:system.cpu.load[all,avg5].last()}
 Net in/out: {{HOST.HOST}:net.if.in["eth0"].last()} / {{HOST.HOST}:net.if.out["eth0"].last()}
 Storage used: {{HOST.HOST}:vfs.fs.size[/,used].last()}
 RAM available: {{HOST.HOST}:vm.memory.size[pavailable].last()}}

Display values from items for an element (link, host, etc.)



Host: host1
 Visible name: HOST1
 Connection: 127.0.0.1
 Uptime: 22 days, 03:24:30
 CPU util: 0.11
 Net in/out: 9.74 Kbps / 9.31 Kbps
 Storage used: 21.9214 %
 RAM available: 85.0515 %

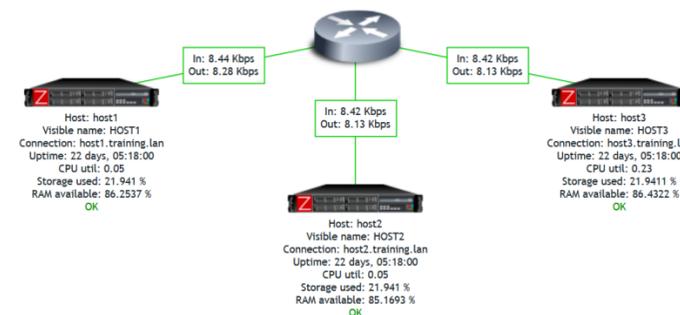
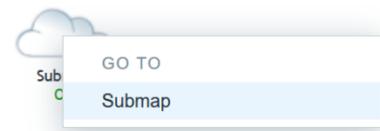
Use a Map element or custom URL to link an icon to another map

Type: Map

Label: Submap

Label location: Default

* Map: Training map: 5 Three hosts with links

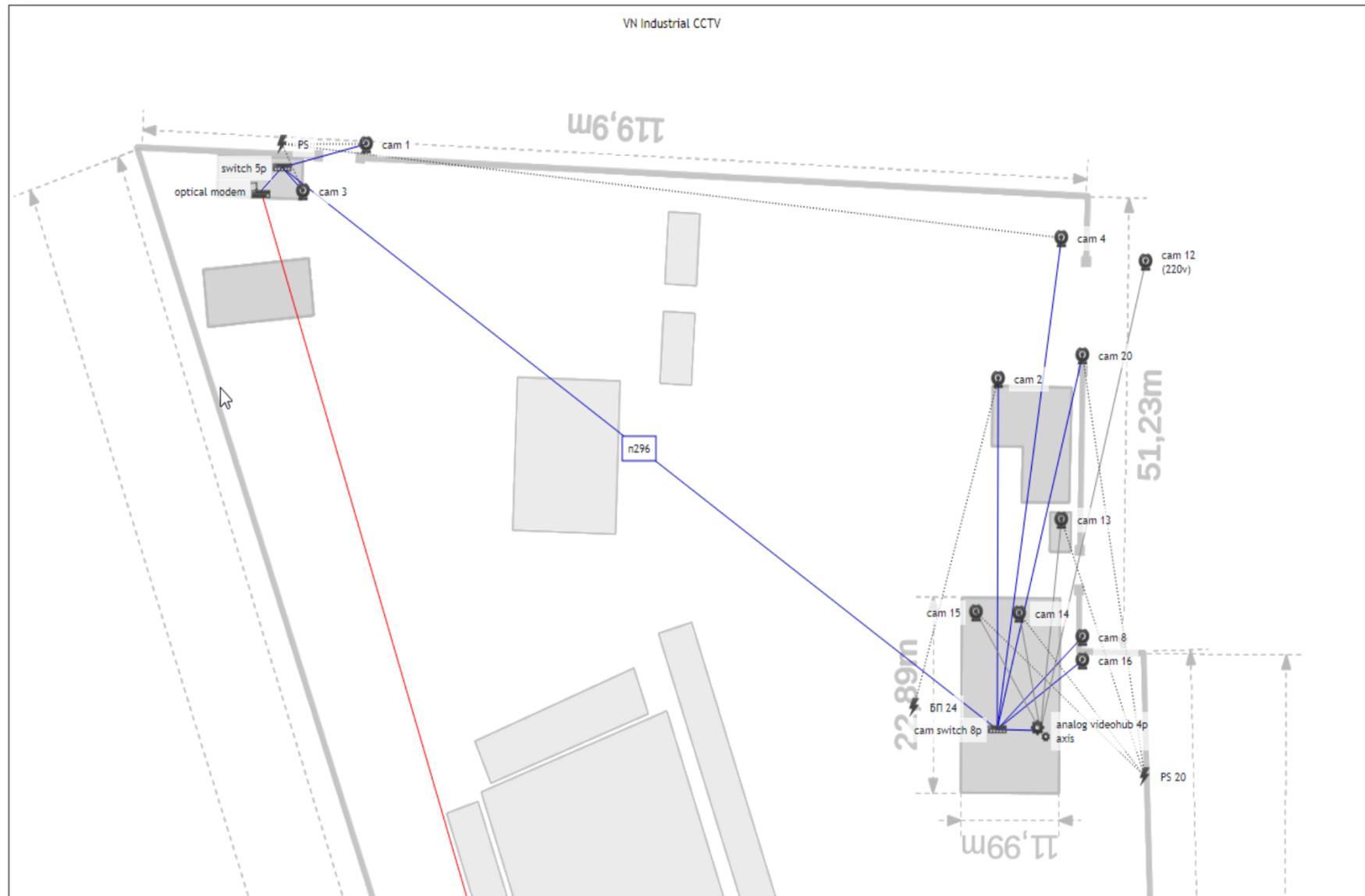


1. Add "Map element"

2. Click on element in map view

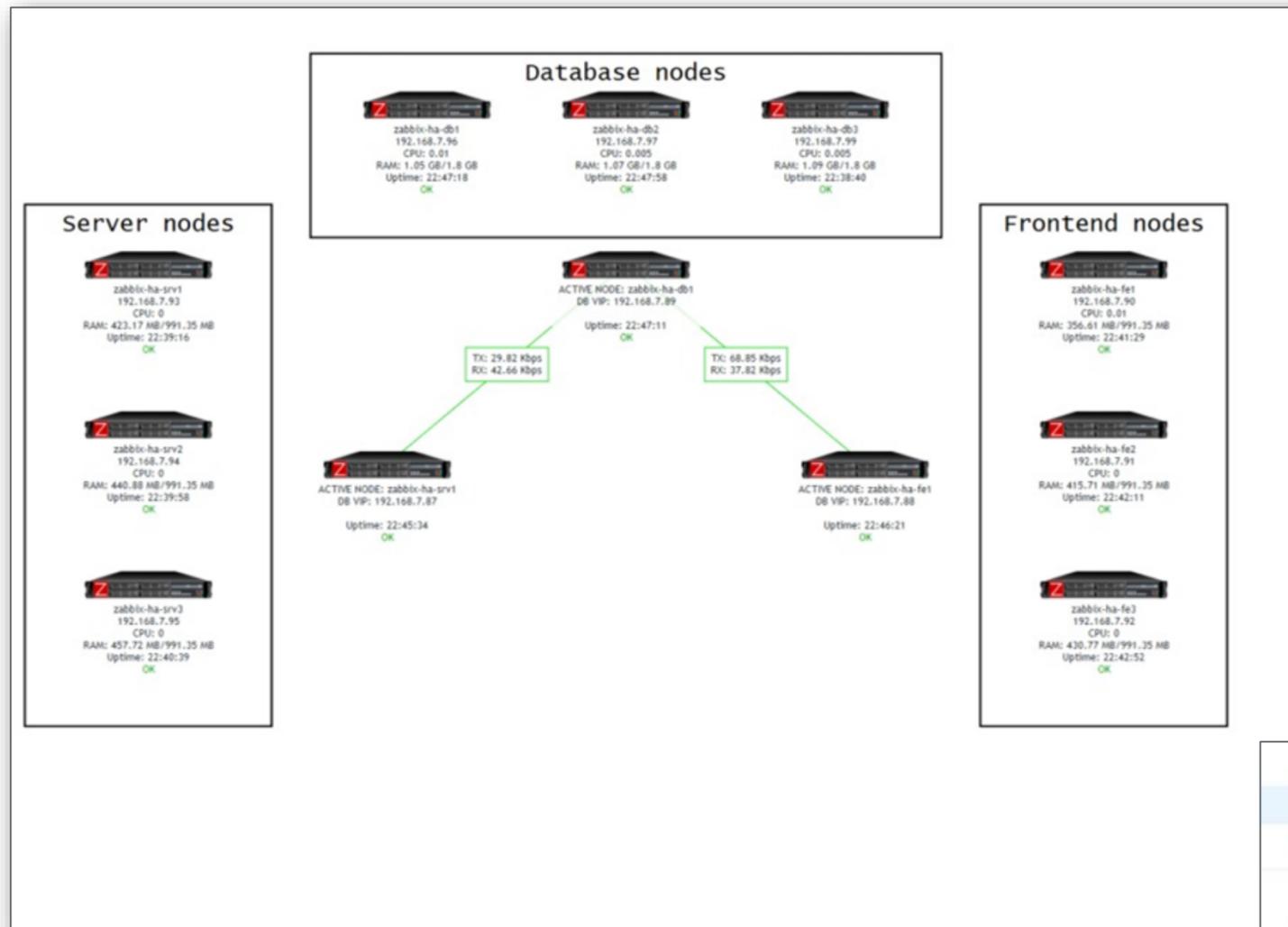
3. Result

EXAMPLE - LOCAL AREA CCTV

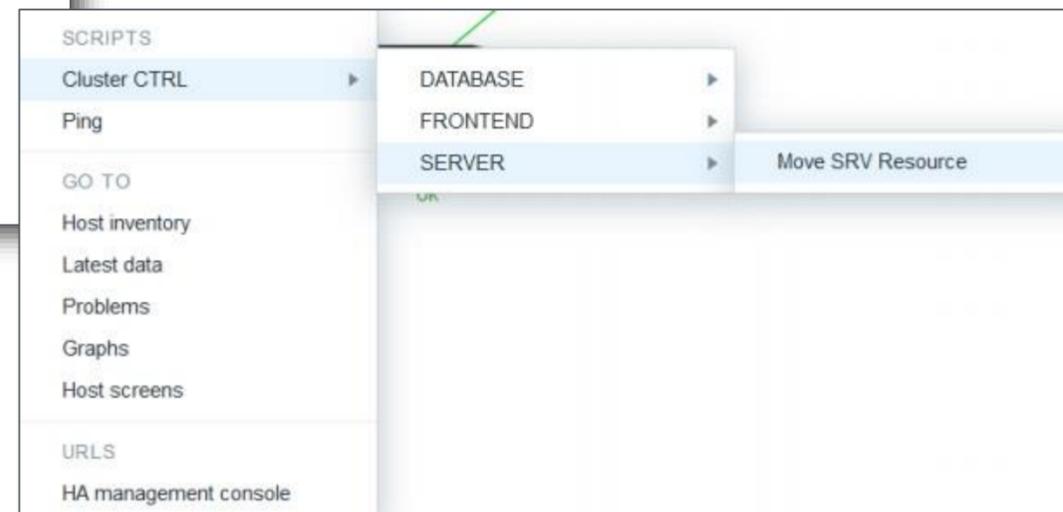


- CCTV big area plan
- Different colors for links
- Custom images for devices
- Buildings, storage, root points

EXAMPLE - HA WITH MENU



- Menu support for map items
- Instant command execution with script support
- Different scripts for Zabbix server, proxy and agent
- No need to switch interface - kiosk mode



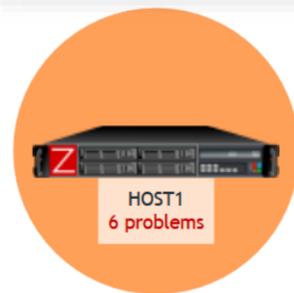
EXAMPLE – PROBLEM ICON VIEWS

Select how problems are displayed with a map element:

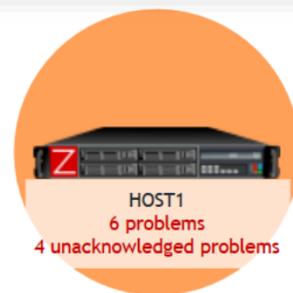
- **Expand single problem** - if there is only one problem, the problem name is displayed. Otherwise, the total number of problems is displayed.
- **Number of problems** - the total number of problems is displayed
- **Number of problems and expand most critical one** - the name of the most critical problem and the total number of problems is displayed.

Display problems Expand single problem Number of problems Number of problems and expand most critical one

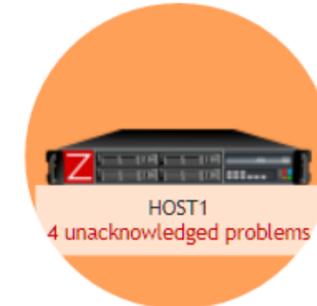
Problem display
 All
 Separated
 Unacknowledged only



All



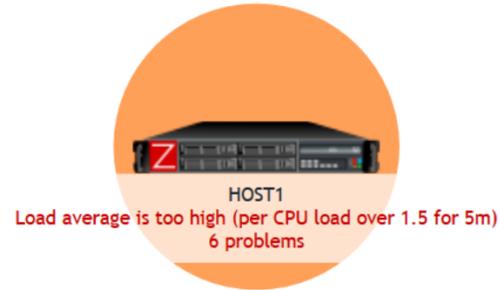
Separated



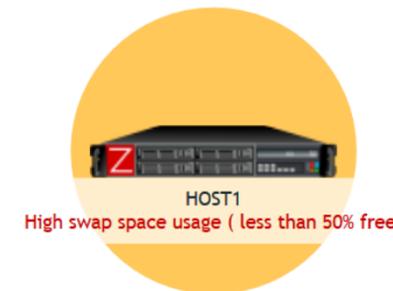
Unacknowledged only



Single problem + number of problems



Expand critical one



Expand single problem

MAPS AND DASHBOARDS

Maps are easy to integrate into Zabbix dashboards and provide an integral visual experience for your team:

ZABBIX << US geo map Edit dashboard

All dashboards / US geo map Zoom out 2021-06-06 08:10:52 – 2021-06-09 01:50:52

From: 2021-06-06 08:10:52 To: 2021-06-09 01:50:52 Apply

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
		This year so far	Last 1 day

Nginx: Nginx: Requests per s...

Timestamp	Value
2021-09-09 05:33:43	0.3683
2021-09-09 05:32:43	0.364
2021-09-09 05:31:43	0.8029
2021-09-09 05:30:43	0.3007
2021-09-09 05:29:43	0.2836
2021-09-09 05:28:43	0.329
2021-09-09 05:27:43	0.302

Map navigation tree

- Europe
- Overall Network Diagram (++)
- Network (+)
- Data Centers Overview (+)
- Vn Industrial CCTV (++)
- Region Map **2 1 1**

Map

Livingston Office 2 problems

HQ Data Center 2 problems

Warehouse OK

Texas Logistic Center OK

Received Traffic on docker0 interface - 607.6114 bps
Received Traffic on ens160 interface - 76.21 Kbps
Received Traffic on lo interface - 1.08 Mbps
Transmit Traffic on docker0 interface - 530.6143 bps
Transmit Traffic on ens160 interface - 11.05 Kbps
Transmit Traffic on lo interface - 1.08 Mbps

Web response time

500ms
400ms
300ms
200ms

6-06 13:33 6-07 01:13 6-07 12:53 6-08 00:33 6-08 12:12 6-08 23:52

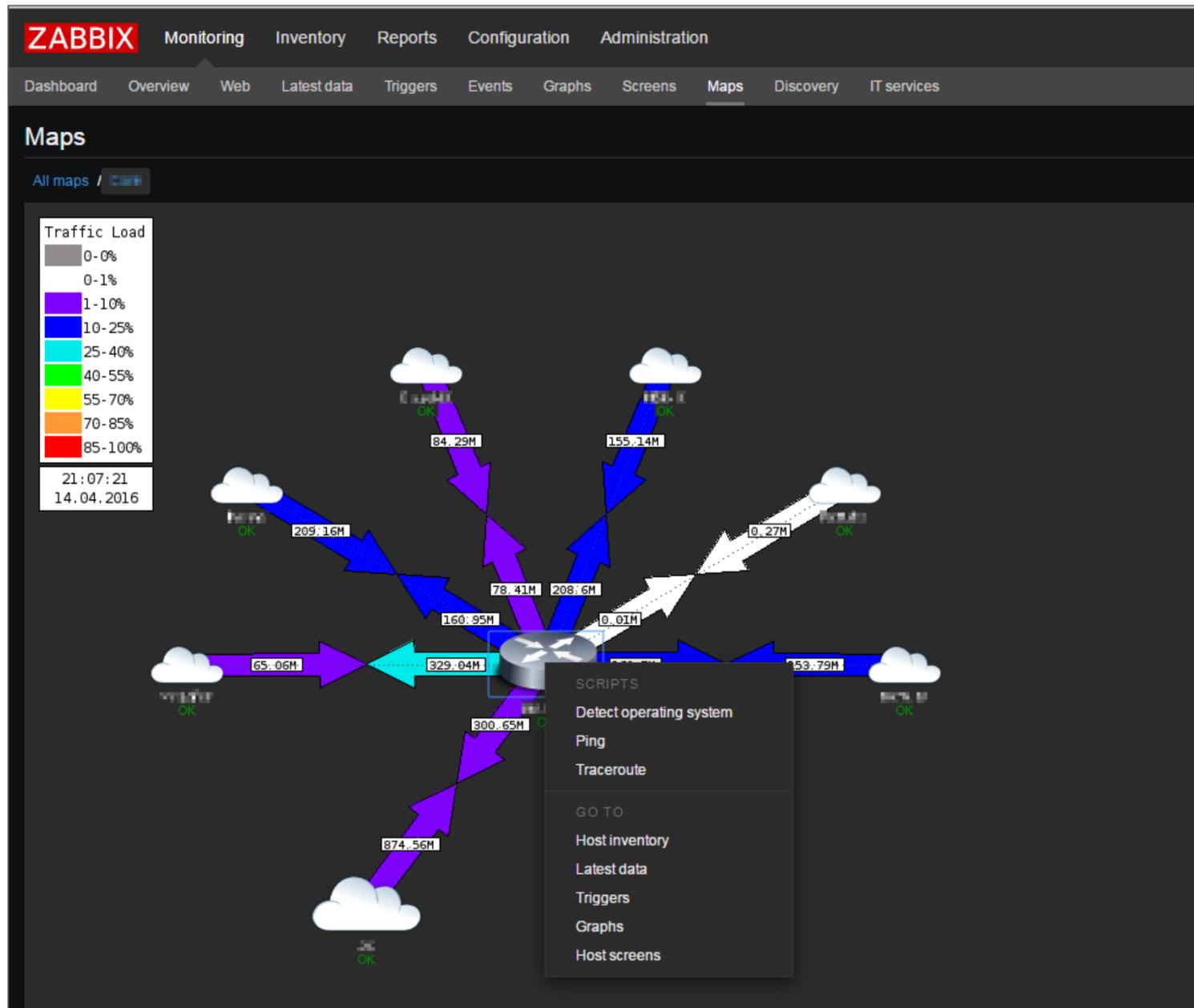
■ Zabbix.org: Response time fo... ■ Zabbix.org: Response time fo... ■ Zabbix.org: Response time fo...

Graph

2% 736 MB
1% 704 MB

MAPS INTEGRATIONS

You may create, modify, delete and get a number of maps via RESTful Zabbix API calls



Please refer to API documentation for complete description.

The screenshot shows the Zabbix API documentation page for the 'map.create' method. The page title is 'ZABBIX Zabbix Documentation 5.4' with a dropdown menu for '5.4 (current)' and another for 'English'. The page content includes a search bar, a breadcrumb trail 'Zabbix documentation > map.create', and a table of contents with sections: 1. Introduction, 2. Definitions, 3. Zabbix processes, 4. Installation, 5. Quickstart, and 6. Zabbix appliance. The 'Description' section contains the API signature `object map.create(object/array maps)` and a note: 'This method allows to create new maps.' A note at the bottom states: 'Note: This method is available to users of any type. Permissions to call the method are defined in the configuration file.' There are icons for refresh, copy, and PDF download.

You may find some additional resources (icons, examples, integrations in Zabbix Share website (share.zabbix.com))



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QUESTIONS?

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THANK YOU!