Visualize IT!

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ZABBIX 2019
Conference
BENELUX

1. Item units

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Item units – making values readable

Zabbix collects raw data, but the data is not always easily readable

Item	Raw metrics	Human readable
Free disk space on /	4498935808	4.19 GB
Incoming traffic on eth 0	5341623	5.34 Mbits
Host uptime	21285721	246 days, 08:42:01
APC Battery status	2	batteryNormal

Solution : use units or value mappings

Item units – Bytes

How to convert Bytes to Kilobytes, Megabytes, Gigabytes etc.. ?

Item	Raw metrics	Human readable
Free disk space on /	4498935808	4.19 GB

Use “special” units called B (Bytes) and Bps (Bytes per second) in item units

Values are correctly divided by 1024 !

Item units – raw values vs human readable

How to convert seconds (unixtime or uptime) to days and hours ?

Item	Raw metrics	Human readable
Host uptime	21285721	246 days, 08:42:01

Use s (seconds) or uptime as a unit

s

Host uptime system.uptime	1m	1w	365d	Zabbix a...	2019-01-29 18:50:32	8m 6d 9h

uptime

Host uptime system.uptime	1m	1w	365d	Zabbix a...	2019-01-29 18:47:32	246 days, 09:26:01

Item units – value mapping

Zabbix reports status as 2, but explanation is needed

Item	Raw metrics	Human readable
APC Battery status	2	batteryNormal

Use value mapping

Show value: APC Battery Status ▼ show value mappings

APC Battery Status

1 ⇒ unknown
2 ⇒ batteryNormal
3 ⇒ batteryLow

APC Battery Status apc	90d	365d	Zabbix t…	2019-01-29 10:0…	batteryNormal (2)

Item units – other

How to multiply other “standard” units ?

Item	Raw metrics	Human readable
Incoming traffic on eth 0	5341643623	5.34 Gbits

Use your own defined units

Item units – other

Sometimes you can get strange results using units

unit	Raw metrics	Result
!persons	2300	2300 persons
!rpm	6500	6500 rpm
!hosts	1500	1500 hosts
!iops	3600	3600 iops

Solution : use ! to display values as is

2. Maps
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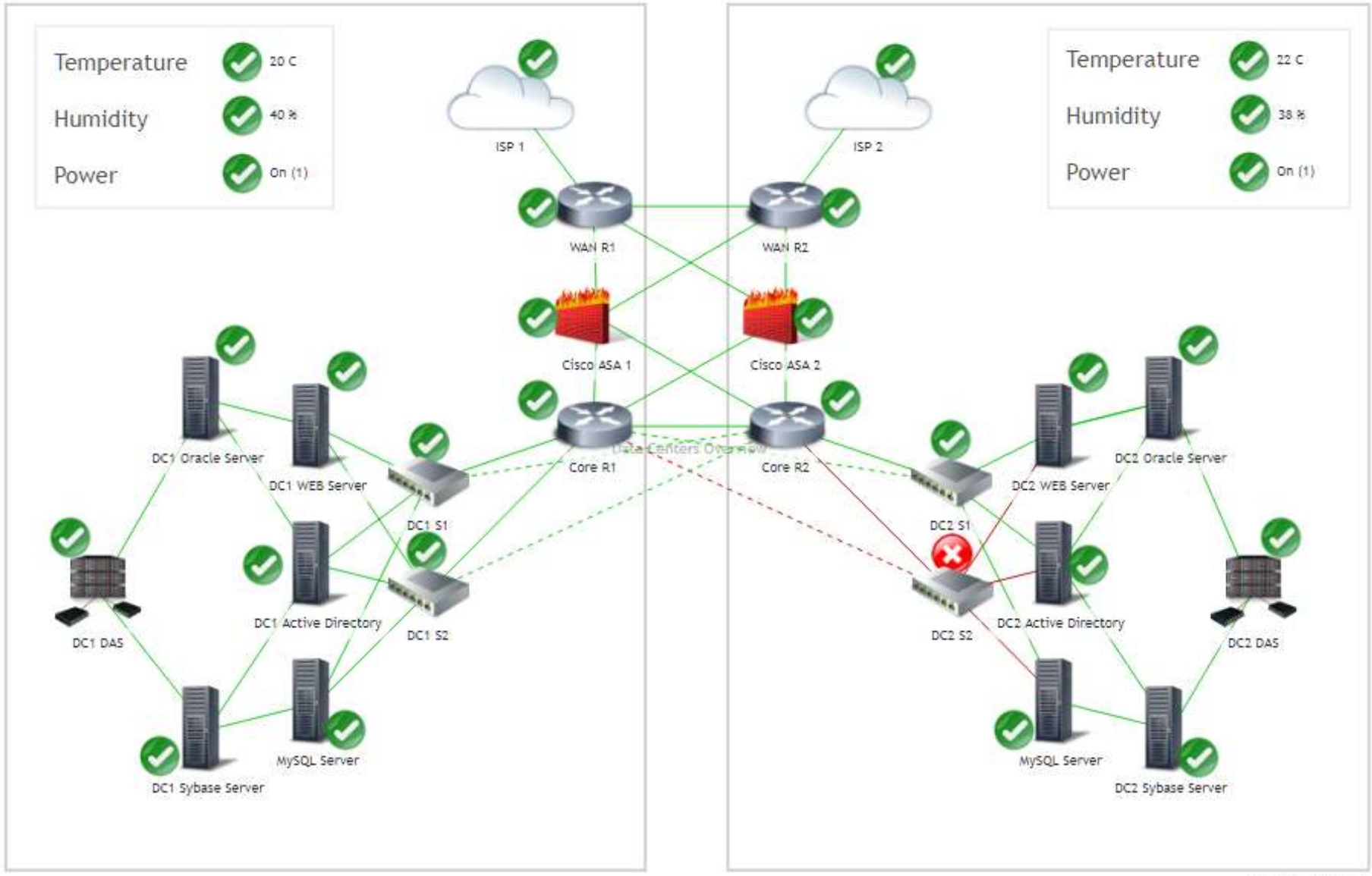
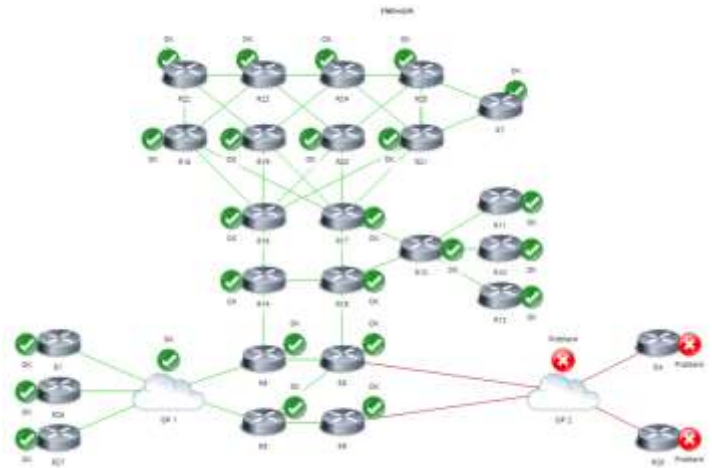
Maps


Temperature
20 C
Humidity
40 %
Power
On (1)
ISP 1
ISP 2
WAN R1
WAN R2
Cisco ASA 1
Cisco ASA 2
Core R1
Core R2
DC1 Oracle Server
DC1 WEB Server
DC1 S1
DC1 S2
DC1 DAS
DC1 Active Directory
MySQL Server
DC1 Sybase Server
Temperature
22 C
Humidity
38 %
Power
On (1)
DC2 Oracle Server
DC2 WEB Server
DC2 S1
DC2 S2
DC2 DAS
DC2 Active Directory
MySQL Server
DC2 Sybase Server

Maps – main benefits

- Display network topology
- Display live data
- Show problem location
- See what else is affected

Average	PROBLEM	SW6-MT-10G	Interface ether6-master(): Link down
Average	PROBLEM	SW6-MT-10G	Interface ether8(): Link down
Warning	PROBLEM	SW5-HP-2530-48G	Interface 7(): In half-duplex mode
High	PROBLEM	Miks	Zabbix agent on Miks is unavailable for 5 minutes
Warning	PROBLEM	RT-ZABBIX-CORE-1	Interface <l2tp-zux>(): High bandwidth usage >90%

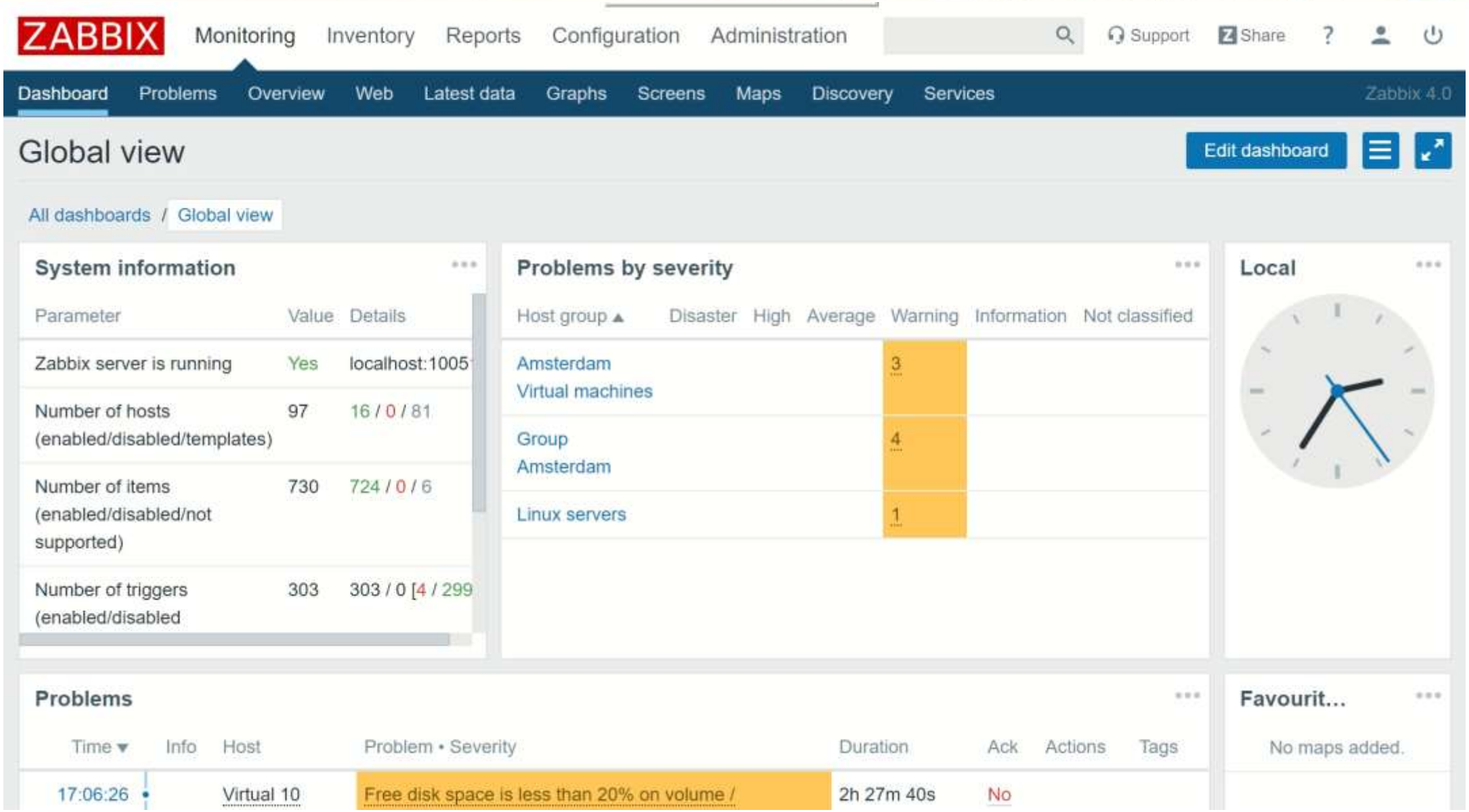


Maps – creating them effortlesly

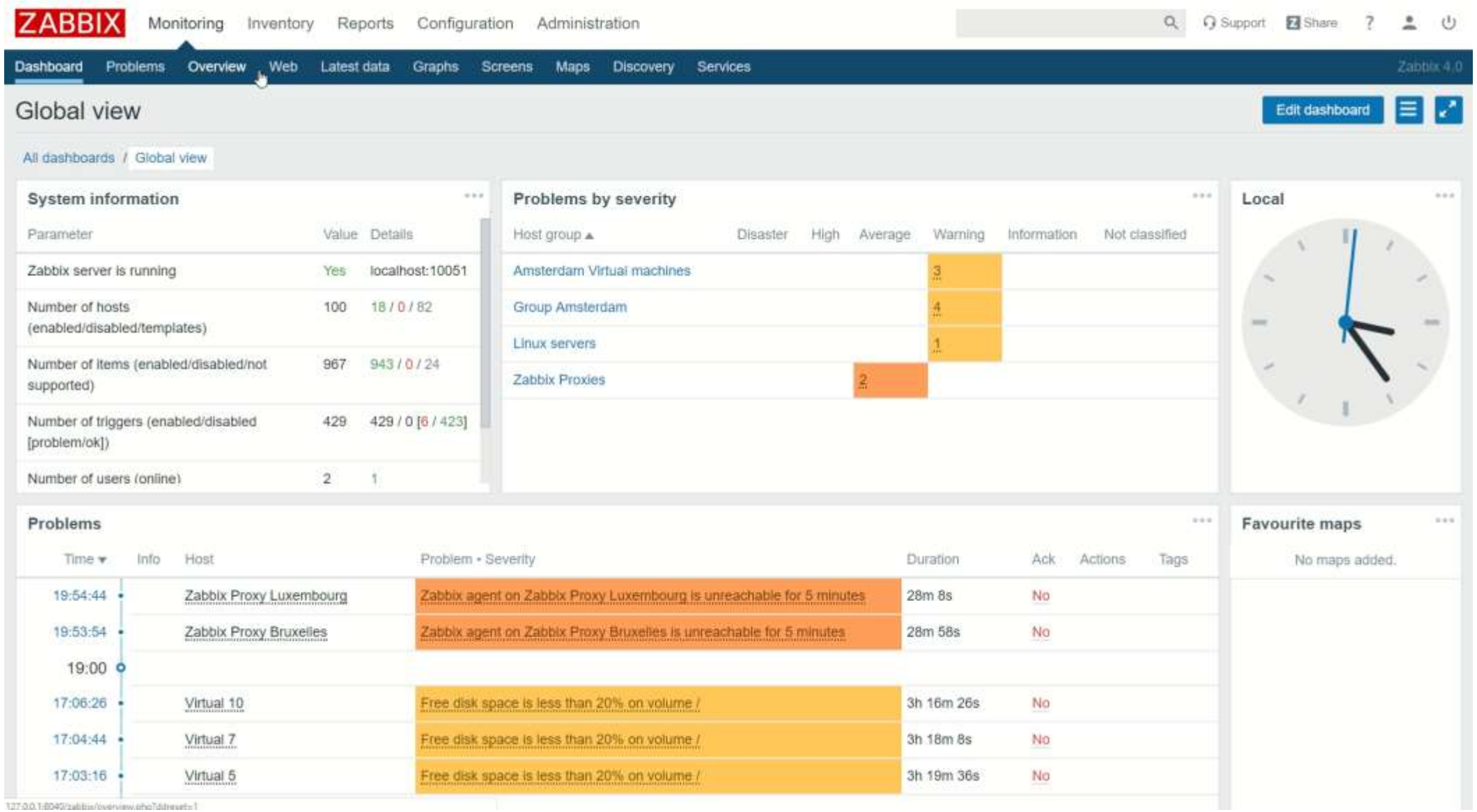
- Assign icons automatically based on inventory data
- Automatically create dynamics maps for host groups
- Use built-in macros and user macros
- Use Zabbix API to automate map creation

Let’s watch !!!

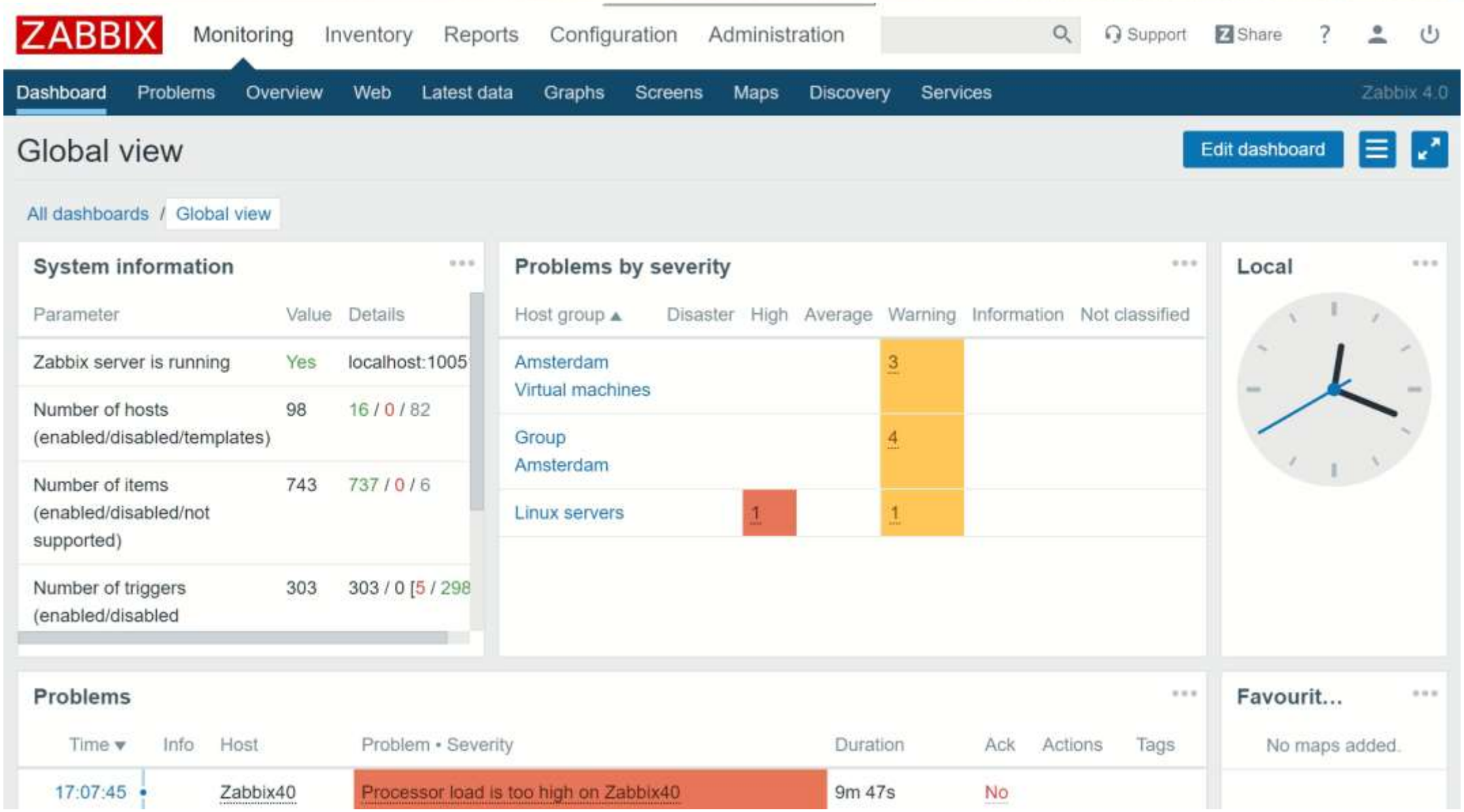
Maps – collecting inventory data



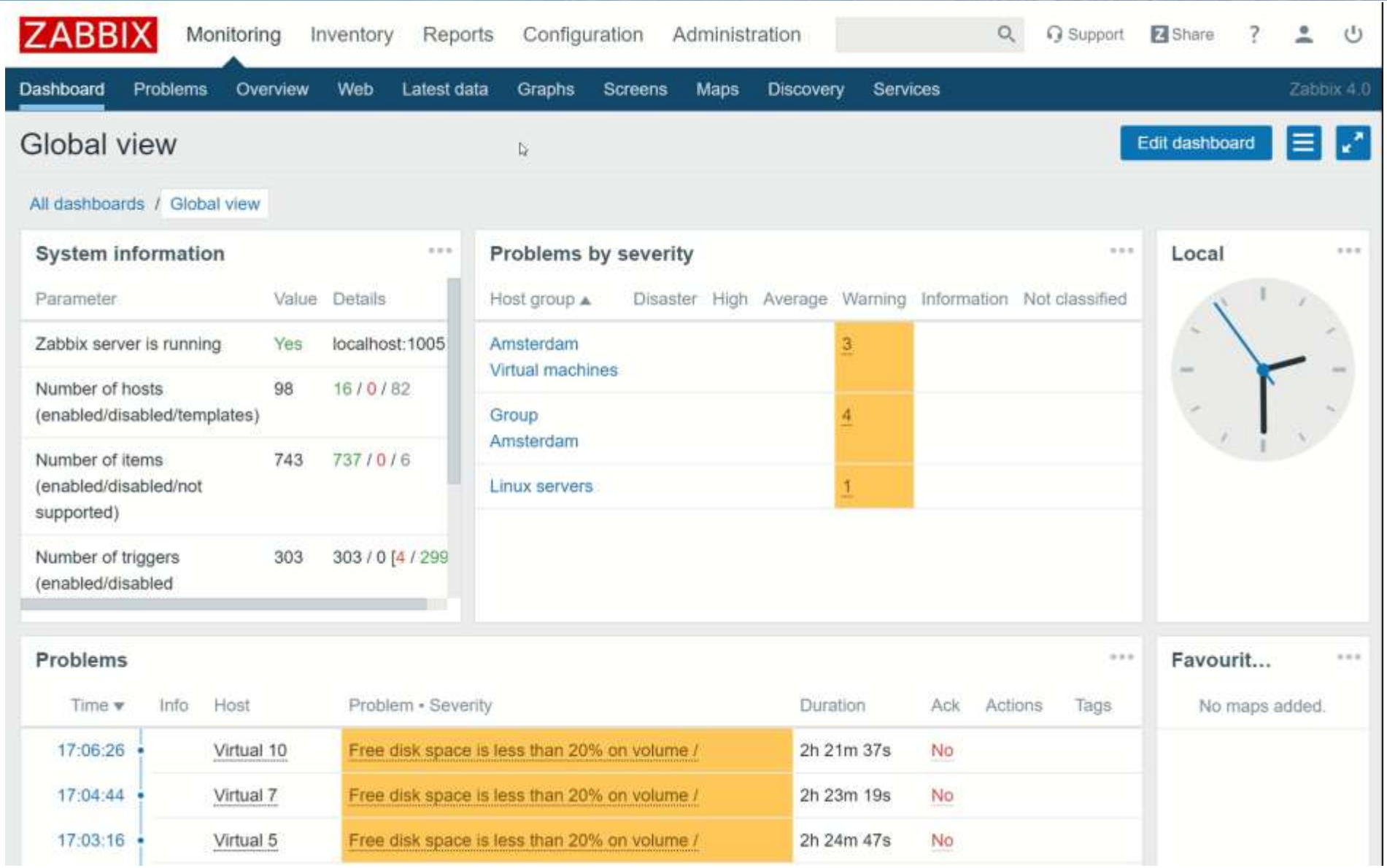
Maps – assigning inventory data to host



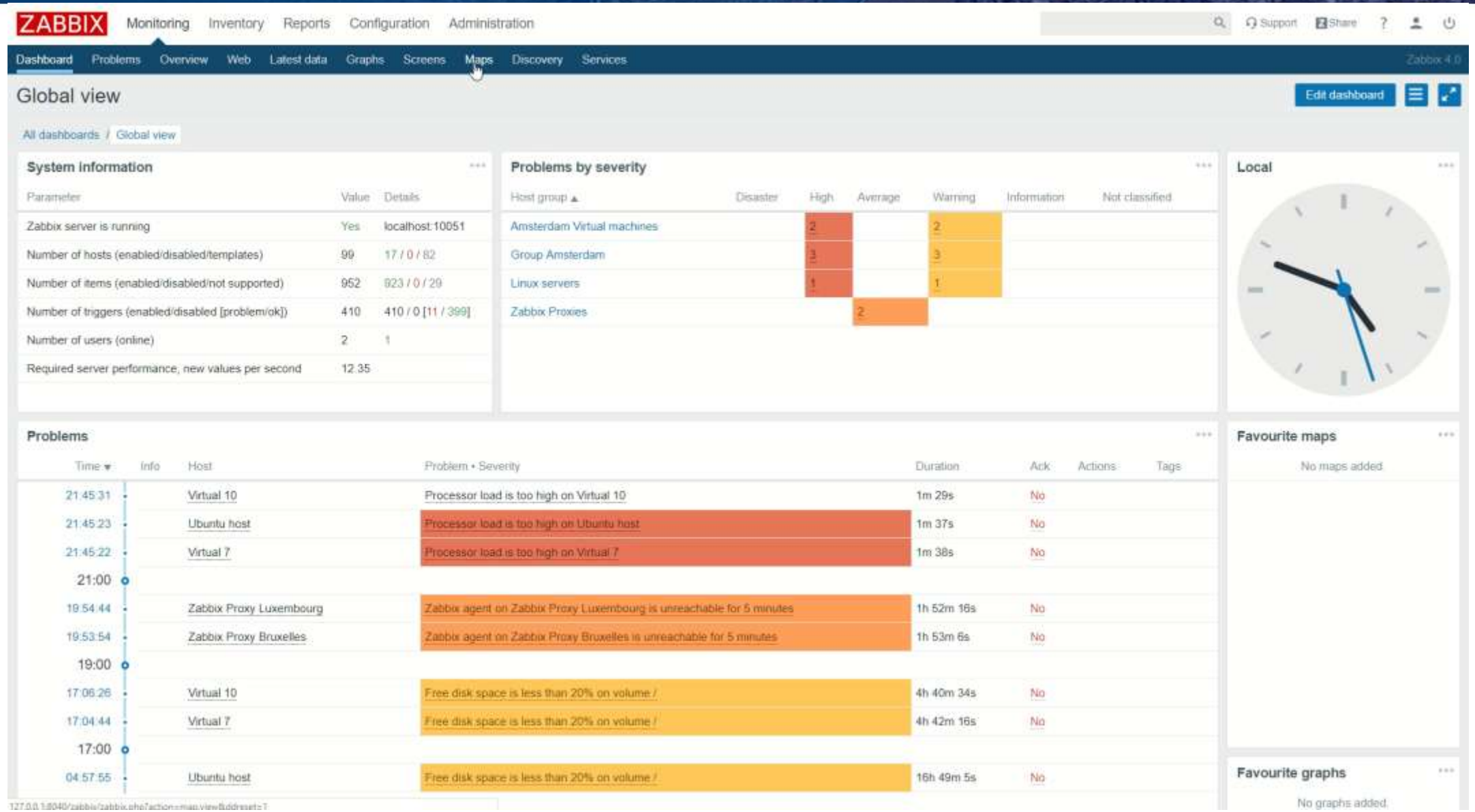
Maps – using custom images



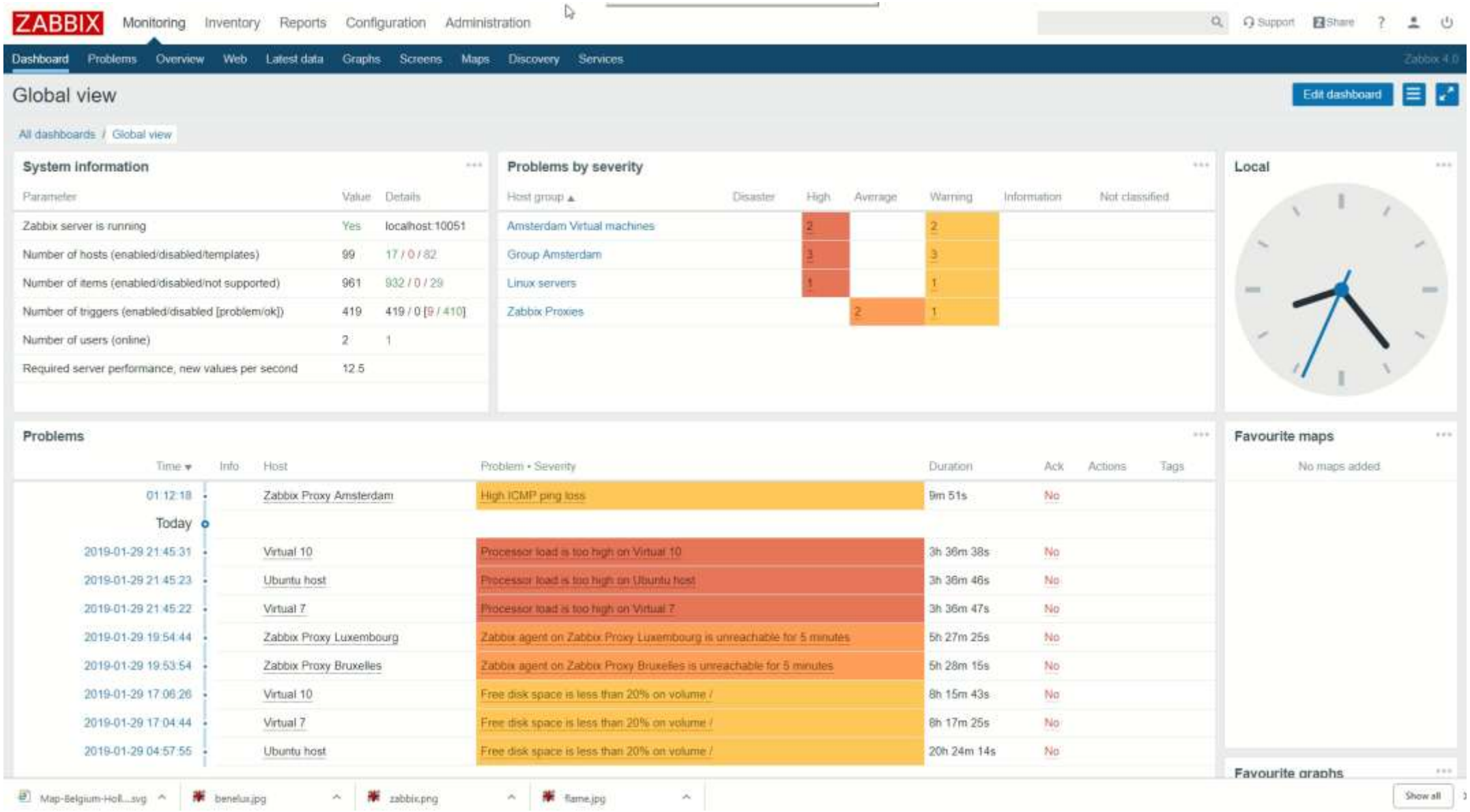
Maps – icon map creation



Maps – building site maps



Maps – building region maps



3. Dashboards
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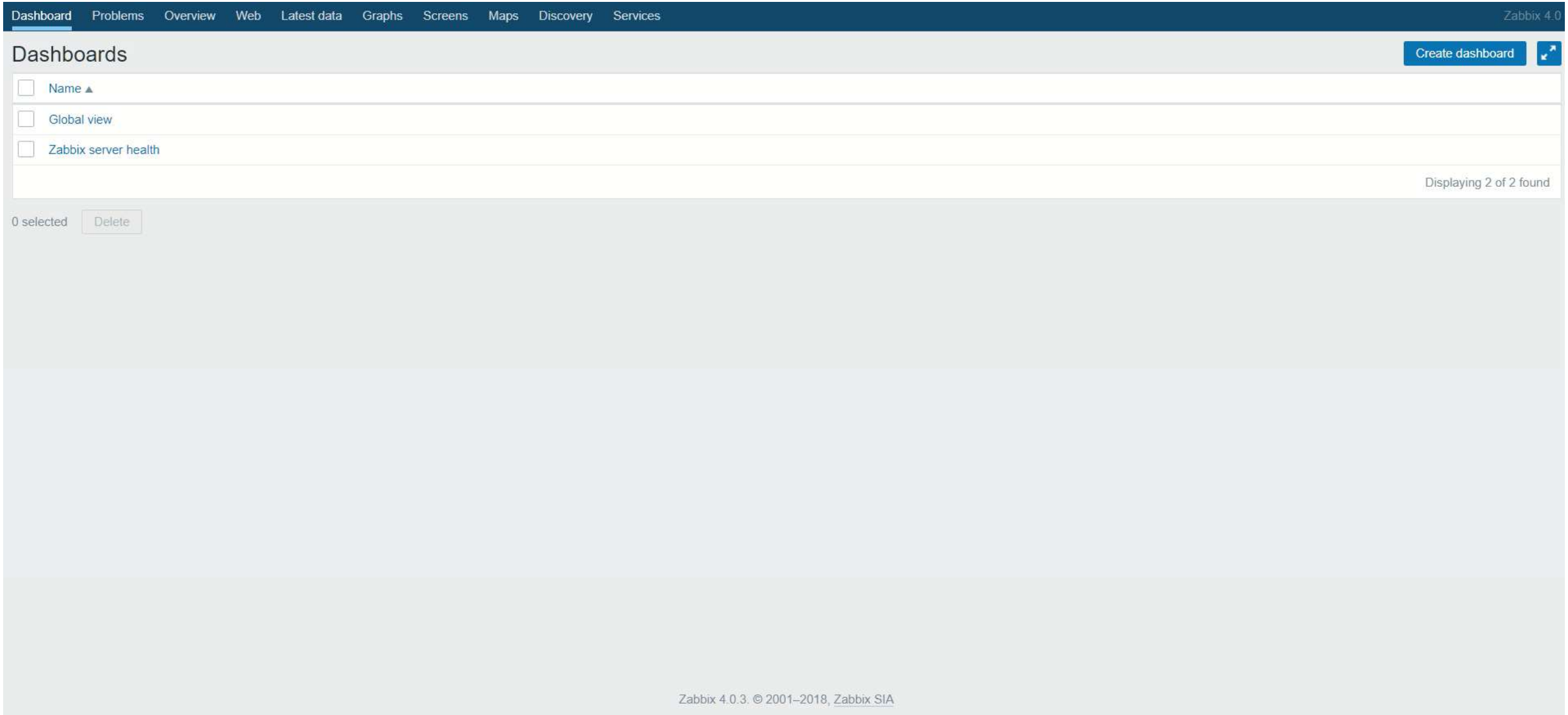
Dashboards – adding multiple items



Dashboards – building dynamic dashboards

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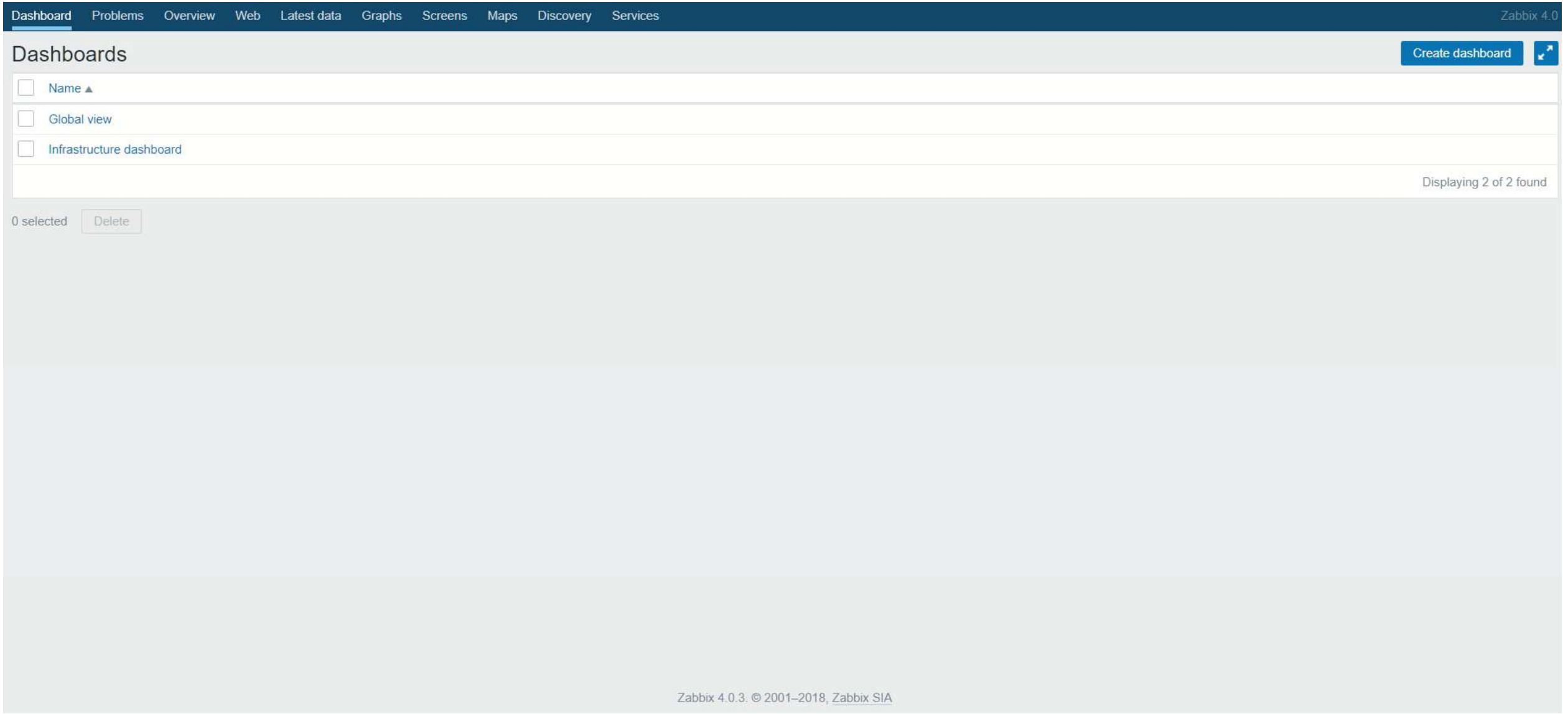

4. Graph widget
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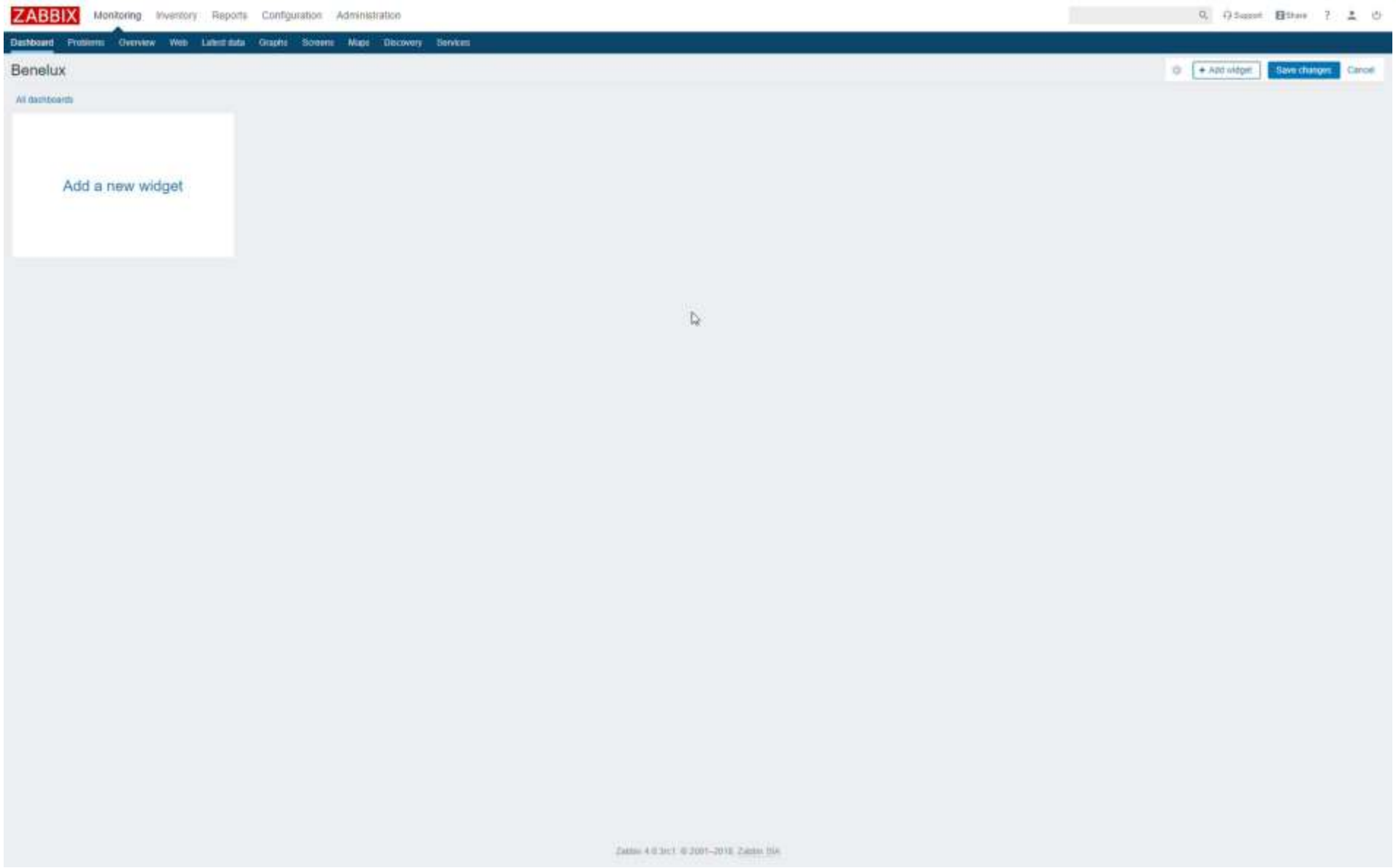
Graph widget – multiple data sets



Graph widget – dynamic data set

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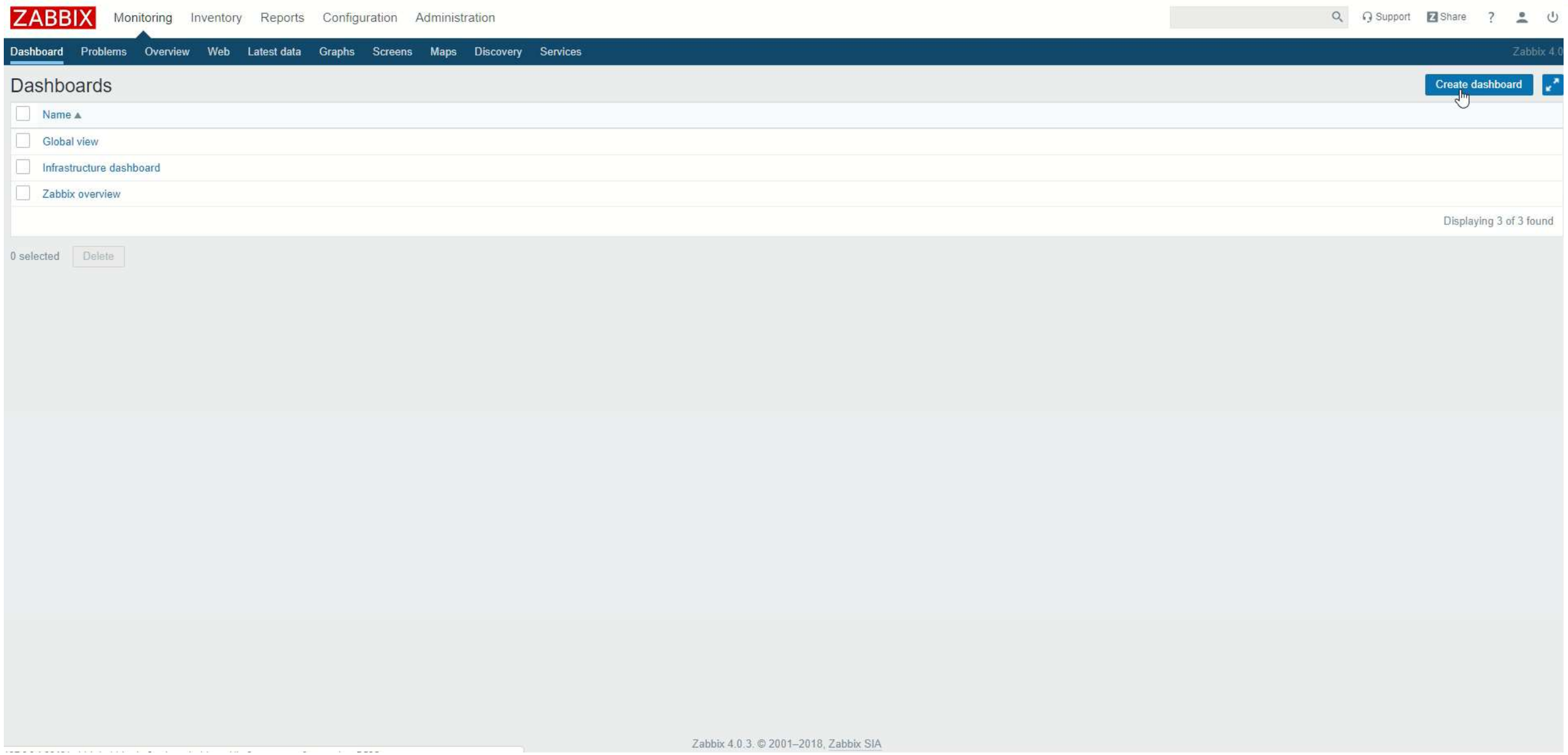

Thank you!

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