



Webinar

# What's new in Zabbix 7.2

all our microphones are muted

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

use Chat for discussion, networking or applause

# Main Focus

Zabbix 7.2 introduces new visualization features, enables new use cases and improves on existing core features of Zabbix

- ▶ 2 new widgets and new Sparkline visualization feature
- ▶ New macros and improvements to existing macro behavior
- ▶ Various VMware monitoring improvements
- ▶ Extending existing monitoring features to enable new use cases
- ▶ Internal improvements and bug fixes
- ▶ New templates and updates



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Sparkline chart






# Sparkline chart

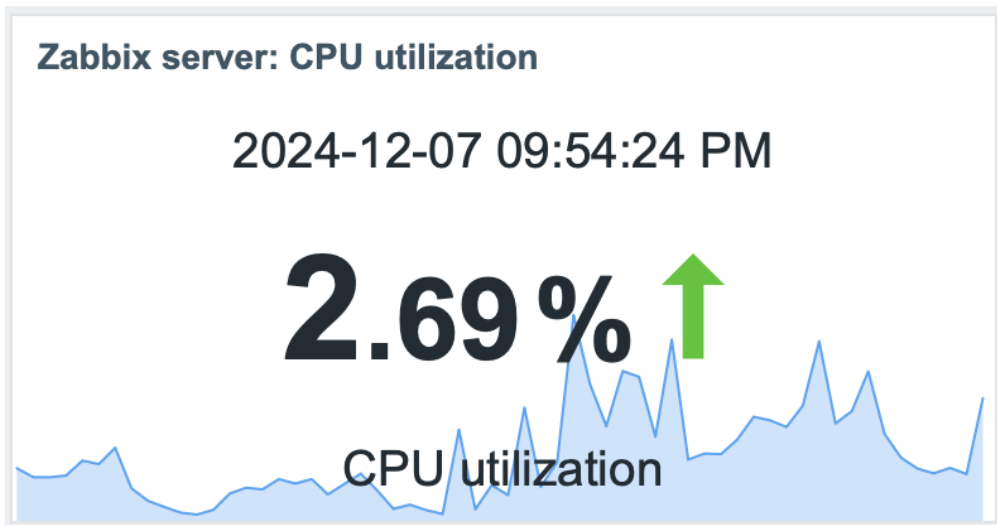
Sparkline charts – quick and simple way to visualize your data

- ▶ Displayed in existing widgets
- ▶ Provides additional context for your data
- ▶ Not a full-fledged analytical solution

Sparkline charts can be enabled in **Item value** , **Top hosts** and **Top items widgets**

# Sparkline chart

Host name	CPU utilization - As is	CPU utilization - Bar	CPU utilization - Indicators	CPU utilization - Sparkline
Zabbix server	2.52 %	<input type="text" value="2.52 %"/>	<input type="text" value="2.52 %"/>	 2.52 %
Zabbix server 2	2.52 %	<input type="text" value="2.52 %"/>	<input type="text" value="2.52 %"/>	 2.52 %
Zabbix server 3	2.49 %	<input type="text" value="2.49 %"/>	<input type="text" value="2.49 %"/>	 2.49 %
Zabbix server 4	2.52 %	<input type="text" value="2.52 %"/>	<input type="text" value="2.52 %"/>	 2.52 %
Zabbix server 5	2.52 %	<input type="text" value="2.52 %"/>	<input type="text" value="2.52 %"/>	 2.52 %



Display item value as **Numeric** Text Binary

Display **As is** Bar Indicators **Sparkline**

Sparkline

Width  Color

Fill

Time period **Dashboard** Widget Custom

History data **Auto** History Trends

Thresholds   
[Add](#)

Decimal places

2

Top items widget

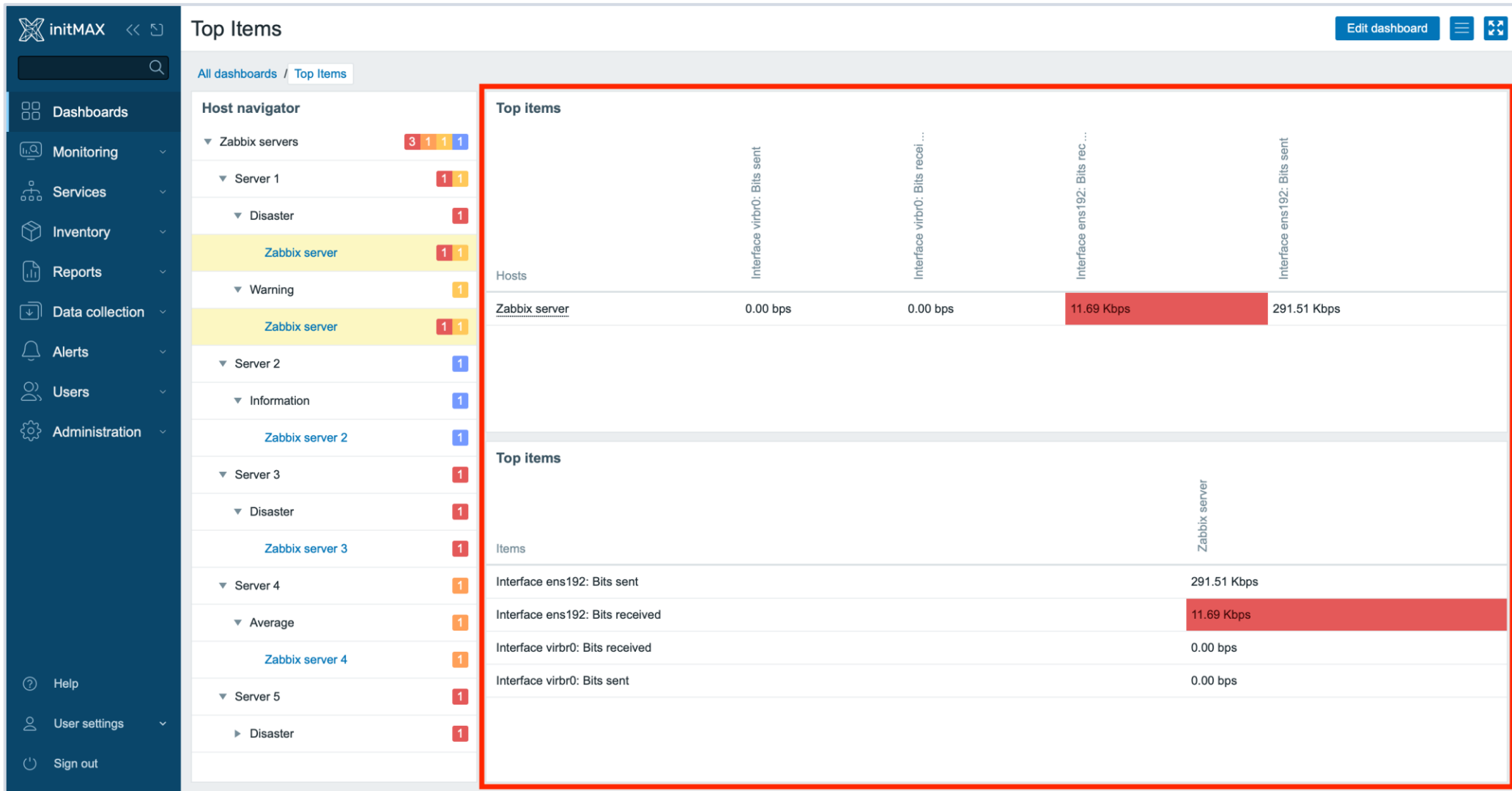


# Top items widget

Data overview widget has been converted to Top items widget

- ▶ Display item values in a table by using host and item filtering
- ▶ Top items widget allows for a fine-grained item selection using item patterns
- ▶ Configurable host and item ordering logic
- ▶ Configurable item ordering logic

# Top items widget



The screenshot shows the Zabbix 7.2 interface with the 'Top Items' widget. The left sidebar contains navigation menus for Dashboards, Monitoring, Services, Inventory, Reports, Data collection, Alerts, Users, and Administration. The main content area is titled 'Top Items' and includes a 'Host navigator' on the left and two 'Top items' tables on the right. The 'Host navigator' shows a tree view of Zabbix servers and their associated items. The top 'Top items' table is a grid showing the top items for each host, with the highest value highlighted in red. The bottom 'Top items' table is a list of items with their values, also highlighting the highest value in red.

Zabbix servers	3 1 1 1
Server 1	1 1
Disaster	1
Zabbix server	1 1
Warning	1
Zabbix server	1 1
Server 2	1
Information	1
Zabbix server 2	1
Server 3	1
Disaster	1
Zabbix server 3	1
Server 4	1
Average	1
Zabbix server 4	1
Server 5	1
Disaster	1

Hosts	Interface virbr0: Bits sent	Interface virbr0: Bits recei...	Interface ens192: Bits rec...	Interface ens192: Bits sent
Zabbix server	0.00 bps	0.00 bps	11.69 Kbps	291.51 Kbps

Items	Zabbix server
Interface ens192: Bits sent	291.51 Kbps
Interface ens192: Bits received	11.69 Kbps
Interface virbr0: Bits received	0.00 bps
Interface virbr0: Bits sent	0.00 bps



# Top items widget

### Edit widget ✕

Type  Show header

Name

Refresh interval

Host groups  Select

Hosts  Select

Host tags

[Remove](#)

[Add](#)

Layout

Show problems

\* Items

Patterns	Actions
<input type="text" value="*"/>	<a href="#">Edit</a> <a href="#">Remove</a>

[Add](#)

[Advanced configuration](#)

# Top items widget

### Update column

\* Item patterns    
patterns

Item tags

[Add](#)

Base color

Display value as

Display

Sparkline

Width   Color

Fill

Time period

\* From

\* To

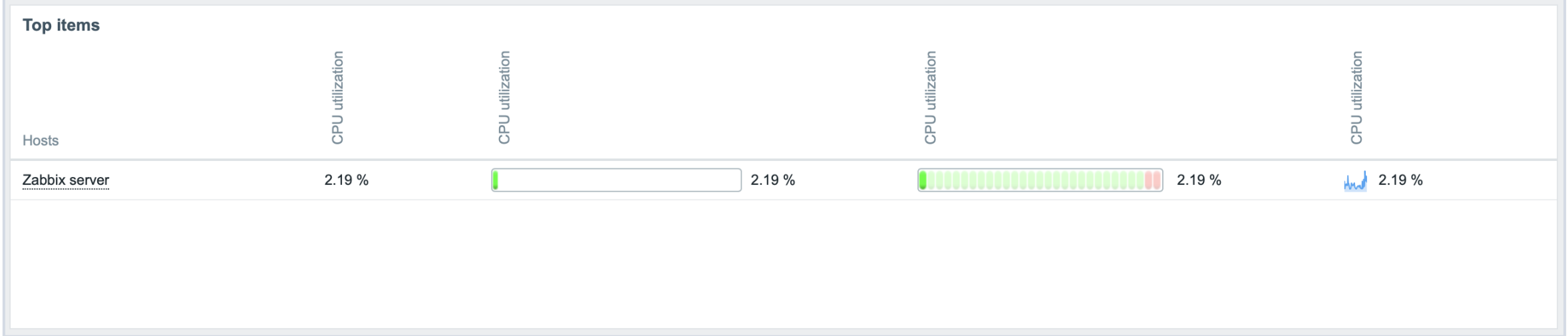
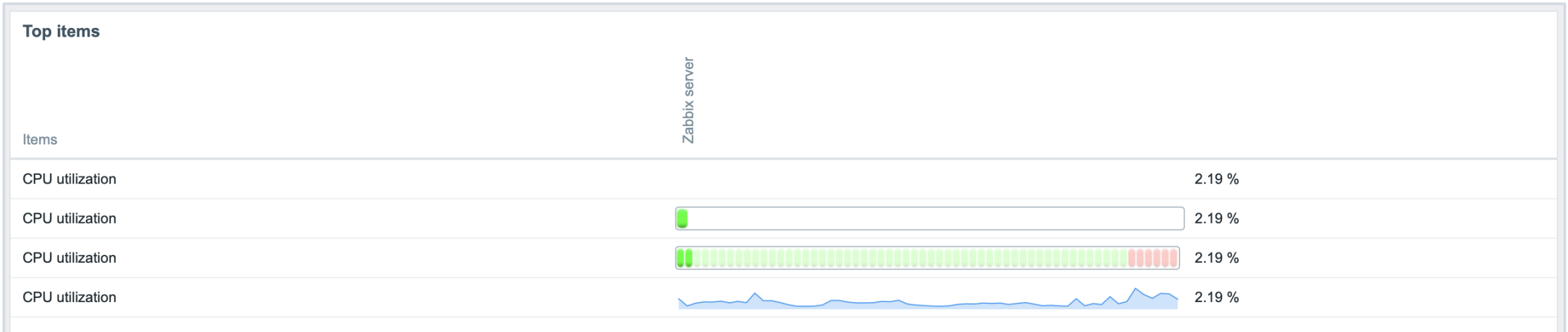
History data

Thresholds   
[Add](#)

Decimal places

Advanced configuration

# Top items widget



# 3

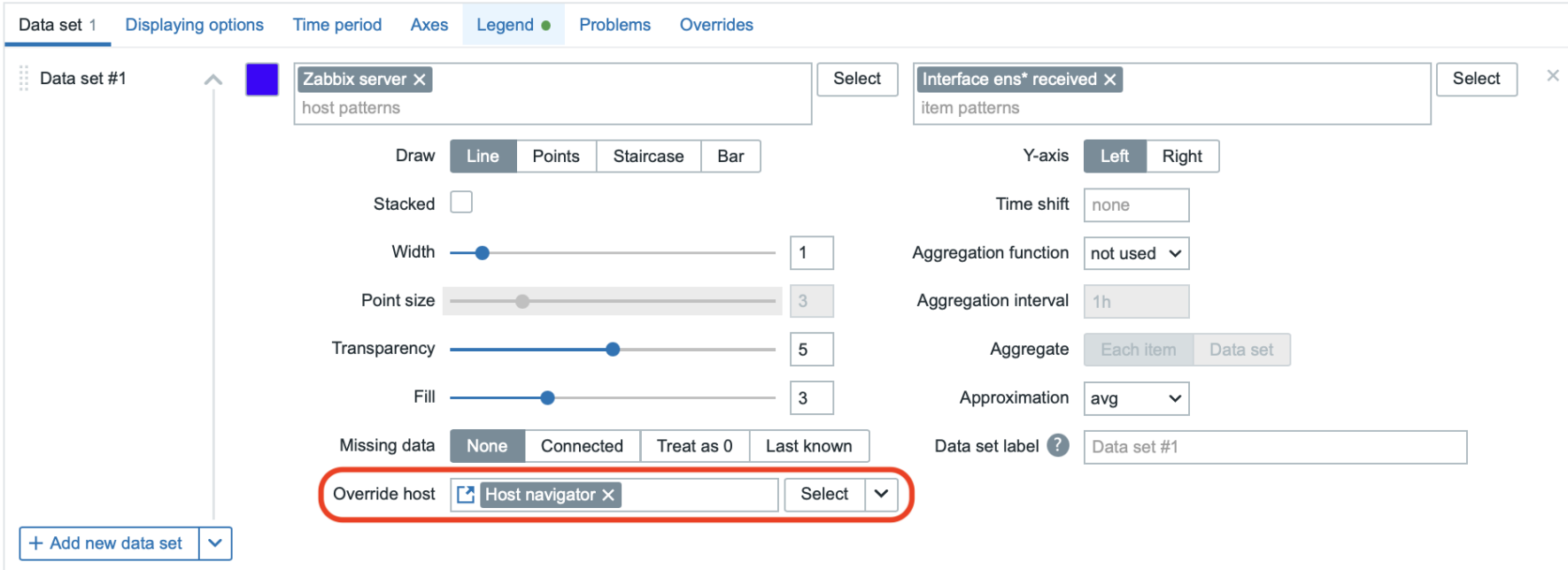
## Host Override in the Graph Widget



# Host Override in the Graph Widget

This functionality allows you to connect the Graph widget with:

- ▶ Host Navigator
- ▶ Honeycomb Widget
- ▶ Item Navigator

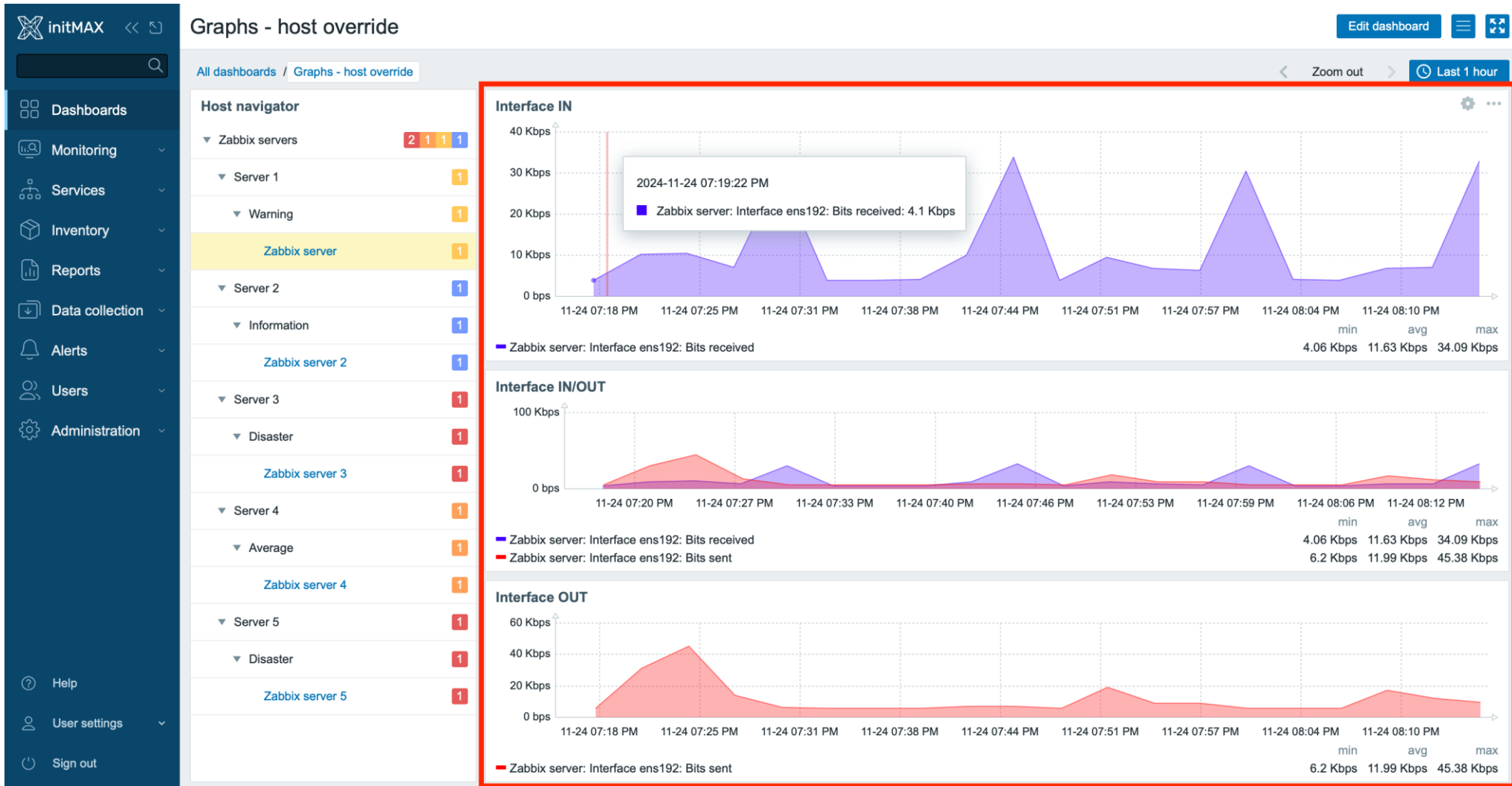


The screenshot displays the configuration interface for a Zabbix Graph widget, specifically the 'Overrides' tab. The interface includes several sections for configuring data sets and their display options. The 'Override host' field is highlighted with a red border, indicating the focus of the document. The 'Override host' field is currently set to 'Host navigator'.

Configuration details shown in the 'Overrides' tab:

- Data set #1** (selected)
- Displaying options**: Zabbix server (host patterns), Interface ens\* received (item patterns)
- Draw**: Line (selected), Points, Staircase, Bar
- Stacked**:
- Width**: 1
- Point size**: 3
- Transparency**: 5
- Fill**: 3
- Missing data**: None (selected), Connected, Treat as 0, Last known
- Y-axis**: Left (selected), Right
- Time shift**: none
- Aggregation function**: not used
- Aggregation interval**: 1h
- Aggregate**: Each item (selected), Data set
- Approximation**: avg
- Data set label**: Data set #1
- Override host**: Host navigator (highlighted)

# Host Override in the Graph Widget



The screenshot displays the Zabbix 7.2 web interface. On the left is a dark blue sidebar with navigation options: Dashboards, Monitoring, Services, Inventory, Reports, Data collection, Alerts, Users, Administration, Help, User settings, and Sign out. The main content area is titled "Graphs - host override" and includes a search bar, "All dashboards / Graphs - host override", and "Edit dashboard" and "Last 1 hour" buttons. A "Host navigator" panel on the left lists various servers and categories with status indicators. The main area contains three line graphs: "Interface IN", "Interface IN/OUT", and "Interface OUT". A red box highlights the "Interface IN" graph, which shows a data point at 2024-11-24 07:19:22 PM with a value of 4.1 Kbps. The graph also shows a legend for "Zabbix server: Interface ens192: Bits received" and summary statistics: min 4.06 Kbps, avg 11.63 Kbps, max 34.09 Kbps. The "Interface IN/OUT" graph shows two series: "Bits received" (blue) and "Bits sent" (red). The "Interface OUT" graph shows "Bits sent" (red) with summary statistics: min 6.2 Kbps, avg 11.99 Kbps, max 45.38 Kbps.

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Host card widget



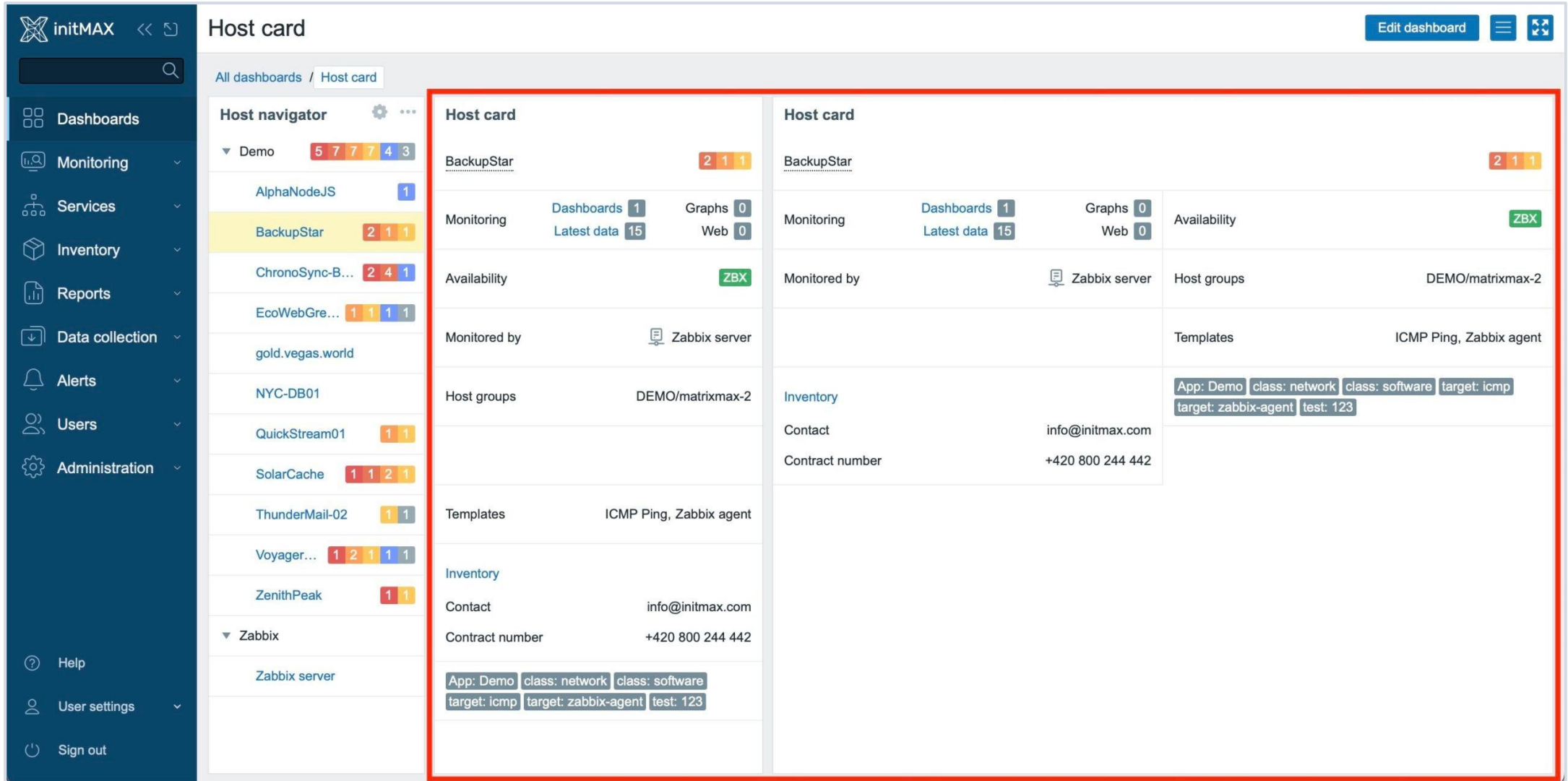
# Host card widget

With Host card widget you can display information about a particular host

- ▶ **Direct host link:** The ability to view detailed host information such as monitoring status, availability, templates, inventory, and more
- ▶ **External widgets:** Integration with widgets like Honeycomb or Host navigator for easy navigation between hosts
- ▶ **Inventory and tags:** Configurable inventory fields (e.g., contact details) and the display of tags for better organization and clarity



# Host card widget



The screenshot displays the Zabbix 7.2 interface with the 'Host card' widget highlighted by a red border. The interface includes a left sidebar with navigation options like Dashboards, Monitoring, Services, Inventory, Reports, Data collection, Alerts, Users, and Administration. The main content area shows a 'Host card' for 'BackupStar' with various monitoring metrics and details.

**Host card**

BackupStar 2 1 1

Monitoring Dashboards 1 Graphs 0  
Latest data 15 Web 0

Availability ZBX

Monitored by Zabbix server

Host groups DEMO/matrixmax-2

Templates ICMP Ping, Zabbix agent

Inventory

Contact info@initmax.com

Contract number +420 800 244 442

App: Demo class: network class: software target: icmp  
target: zabbix-agent test: 123


# Host card widget

### Edit widget ✕

Type Host card ▼ Show header

Name

Refresh interval Default (1 minute) ▼

\* Host  Host navigator ✕ Select ▼

Show suppressed problems

Show

Name	
1: <span>Monitoring</span> <span>▼</span>	<a href="#">Remove</a>
2: <span>Availability</span> <span>▼</span>	<a href="#">Remove</a>
3: <span>Monitored by</span> <span>▼</span>	<a href="#">Remove</a>
4: <span>Host groups</span> <span>▼</span>	<a href="#">Remove</a>
5: <span>Description</span> <span>▼</span>	<a href="#">Remove</a>
6: <span>Templates</span> <span>▼</span>	<a href="#">Remove</a>
7: <span>Inventory</span> <span>▼</span>	<a href="#">Remove</a>
8: <span>Tags</span> <span>▼</span>	<a href="#">Remove</a>

[Add](#)

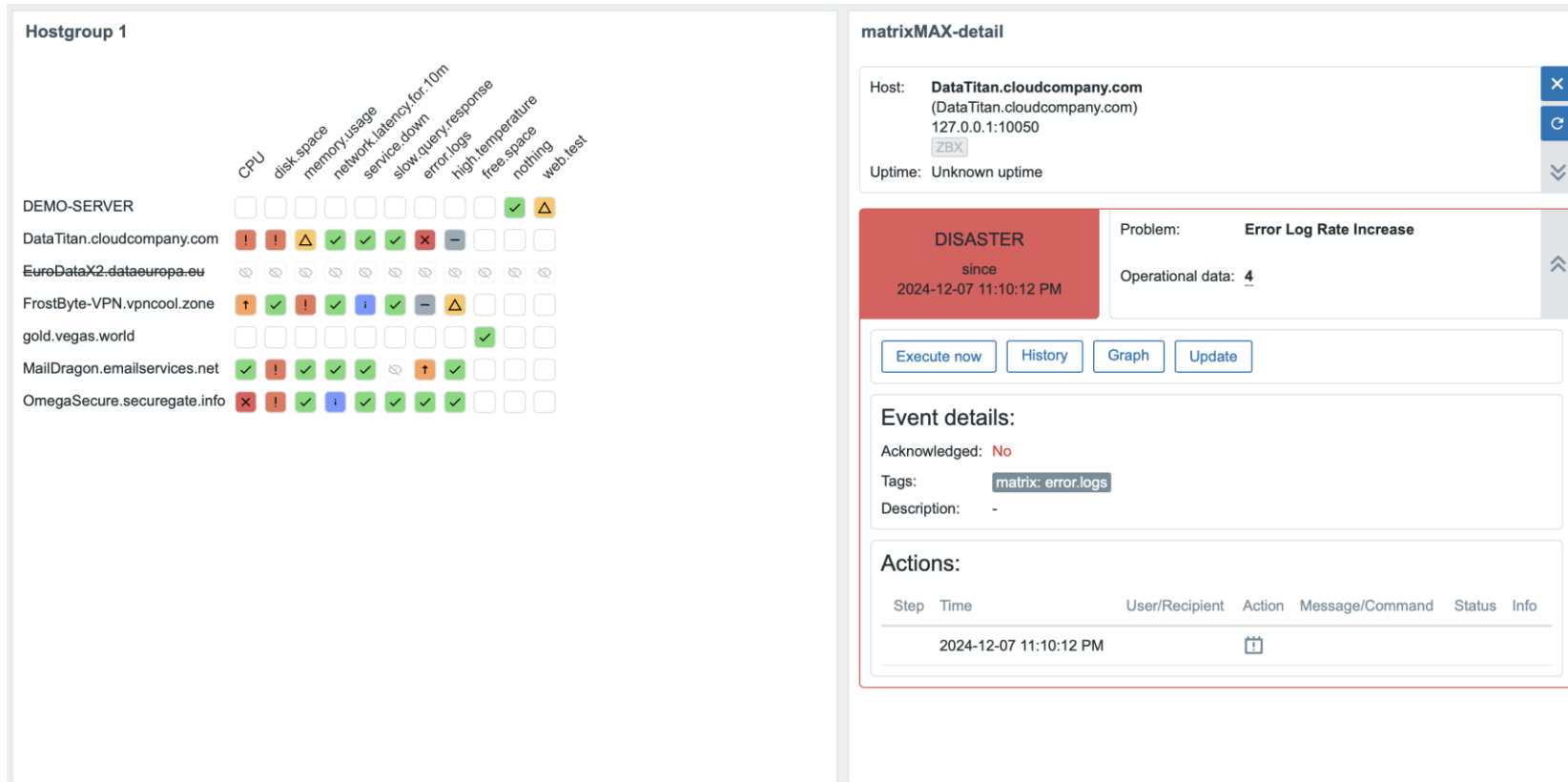
Inventory fields Contact ✕ Contract number ✕ Select

Apply Cancel

# Host card widget

We already have this widget, it is called matrixMAX

► **Link:** <https://www.initmax.com/eshop/>



The screenshot displays two parts of the Zabbix interface. On the left is the 'Hostgroup 1' widget, which shows a grid of monitoring metrics for several hosts. The metrics include CPU, disk\_space, memory\_usage, network\_latency\_for\_10m, service\_down, slow\_query\_response, error\_logs, high\_temperature, free\_space, nothing, and web\_test. The host 'DataTitan.cloudcompany.com' shows several critical (red) and warning (yellow) indicators. On the right is the 'matrixMAX-detail' widget, which provides a detailed view of a 'DISASTER' event. The event is titled 'Error Log Rate Increase' and occurred on 2024-12-07 at 11:10:12 PM. It includes buttons for 'Execute now', 'History', 'Graph', and 'Update'. The event details section shows 'Acknowledged: No', 'Tags: matrix: error\_logs', and 'Description: -'. The actions section contains a table with one entry: a timestamp '2024-12-07 11:10:12 PM' and a calendar icon.

Host	CPU	disk_space	memory_usage	network_latency_for_10m	service_down	slow_query_response	error_logs	high_temperature	free_space	nothing	web_test
DEMO-SERVER	○	○	○	○	○	○	○	○	○	○	○
DataTitan.cloudcompany.com	!	!	!	!	!	!	!	!	!	!	!
EuroDataX2.dataeuropa.eu	○	○	○	○	○	○	○	○	○	○	○
FrostByte-VPN.vpncool.zone	↑	!	!	!	!	!	!	!	!	!	!
gold.vegas.world	○	○	○	○	○	○	○	○	○	○	○
MailDragon.emailservices.net	!	!	!	!	!	!	!	!	!	!	!
OmegaSecure.securegate.info	!	!	!	!	!	!	!	!	!	!	!

**matrixMAX-detail**

Host: **DataTitan.cloudcompany.com**  
(DataTitan.cloudcompany.com)  
127.0.0.1:10050  
ZBX

Uptime: Unknown uptime

**DISASTER**  
since  
2024-12-07 11:10:12 PM

Problem: **Error Log Rate Increase**  
Operational data: 4

Execute now History Graph Update

**Event details:**  
Acknowledged: No  
Tags: matrix: error\_logs  
Description: -

**Actions:**

Step	Time	User/Recipient	Action	Message/Command	Status	Info
	2024-12-07 11:10:12 PM					

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Maximum Number of Rows in Widgets



# Maximum Number of Rows in Widgets

The maximum number of rows that can be displayed in widgets on a dashboard has been increased from 100 to 1000. This change applies to the following widgets:

- ▶ Action Log
- ▶ Item History
- ▶ Problems
- ▶ Top Hosts
- ▶ Top Triggers

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NVIDIA GPU monitoring

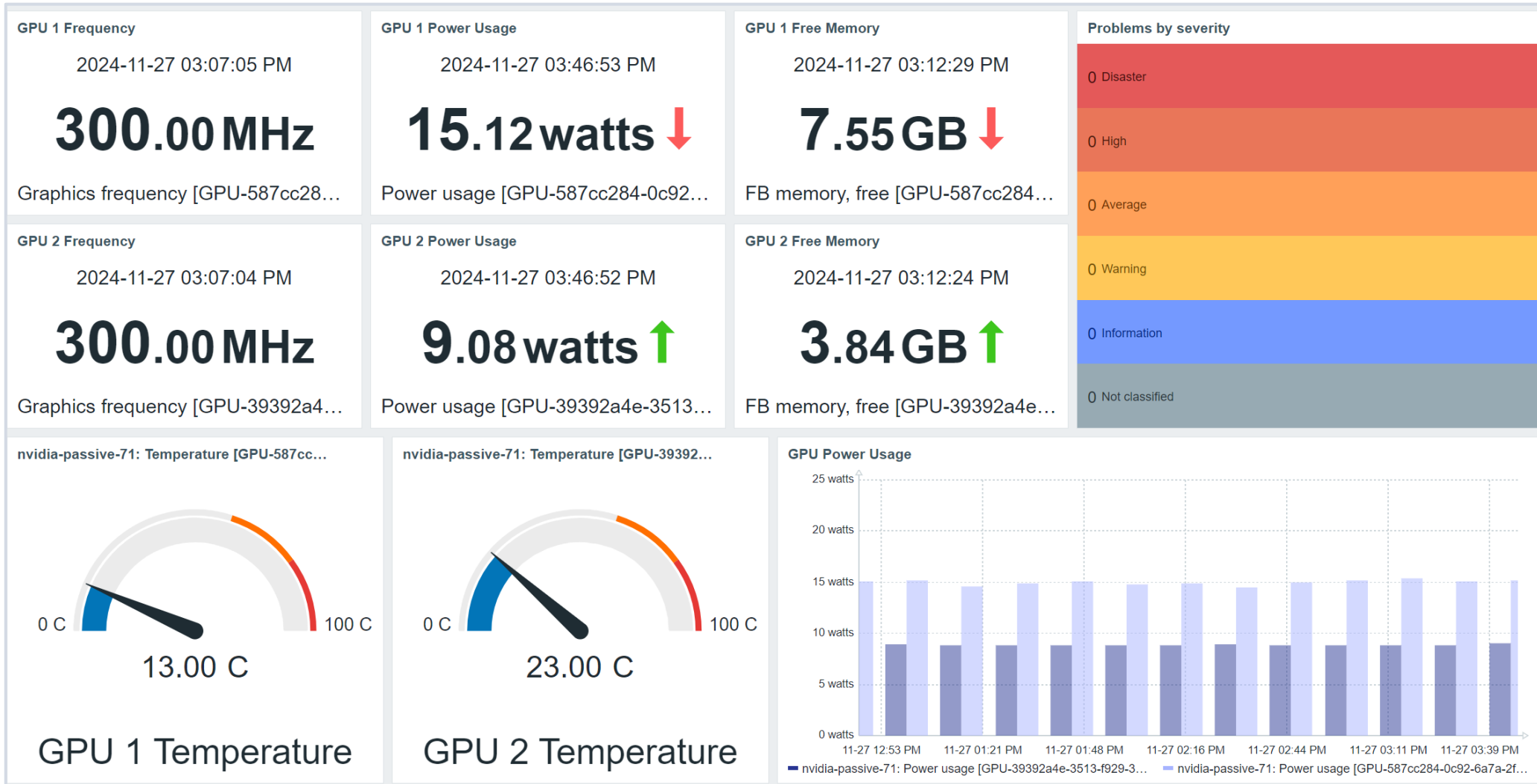


# NVIDIA GPU monitoring

Introducing the official NVIDIA GPU monitoring Zabbix agent2 plugin and template

- ▶ Supported on Linux and Windows environments
- ▶ Automatically discover NVIDIA GPU
- ▶ Monitor metrics like GPU utilization, power usage, temperature and more

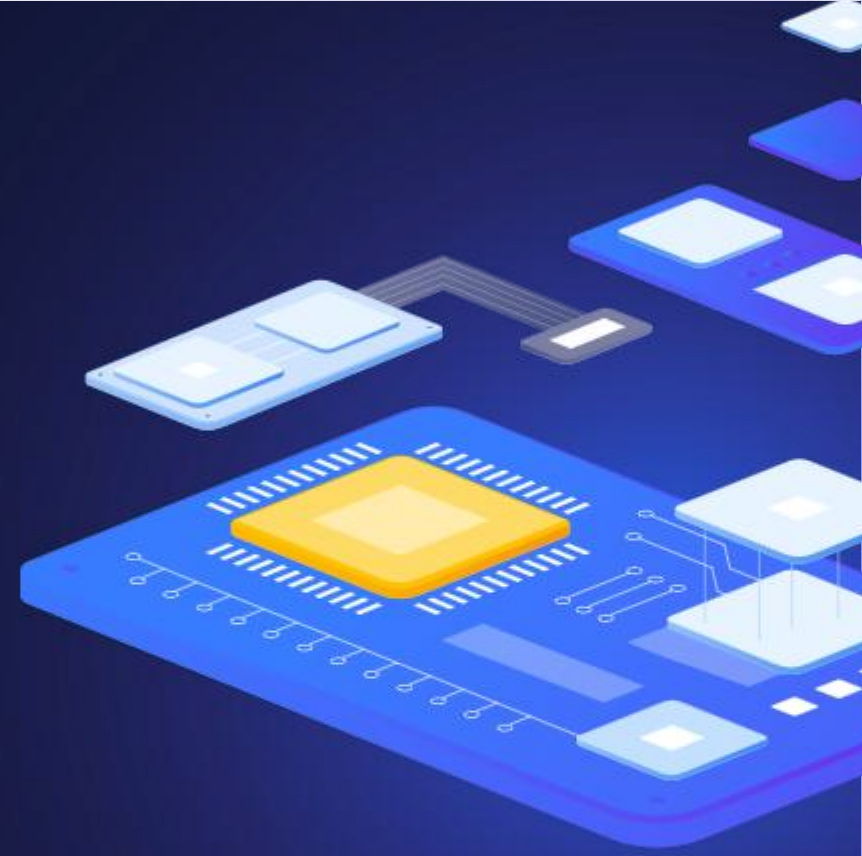
# NVIDIA GPU monitoring





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Dependent items limitations



# Dependent items

Dependent item limits are completely removed:

- ▶ The previous limitation of a maximum of **29,999** dependent items per master item and only **3 dependency levels** (Master > Dependent > Dependent > Dependent)

Zabbix 7.2 now supports:

- ▶ **Unlimited dependent items** per master item
- ▶ **Unlimited levels** of dependency

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SSH item changes



# SSH item changes

## Configuration of SSH Public Keys

- ▶ `ssh.run[unique short description,<ip>,<port>,<encoding>,<ssh options>,<subsystem>]`
- ▶ Zabbix users can now more easily and flexibly set security parameters for remote access via SSH, improving the overall security of the monitoring solution

# SSH item changes

**ssh.run** items now support a new subsystem parameter

- ▶ `ssh.run[unique short description,<ip>,<port>,<encoding>,<ssh options>,<subsystem>]`
- ▶ Collect data using various subsystems such as SFTP or NETCONF
- ▶ Enables monitoring of network devices limited to NETCONF monitoring
- ▶ May require using a specific script syntax in the SSH item

# 9

Specifying configuration parameters  
with environment variables



# Passing environment variables

Zabbix configuration file parameters can now be specified via environment variables

- ▶ Configuration file parameters now accept environment variables
- ▶ E.g.: `Hostname=${ZBX_HOSTNAME}`
- ▶ Can also be used in container deployments

```
Hostname=${ZBX_HOSTNAME}  
BufferSize=${BUFSZ}  
ListenPort=${LISTENPORT}  
UserParameter=${_UsrPar01}  
UserParameter=${_UsrPar02}
```

```
docker run --name zabbix-agent -e ZBX_HOSTNAME="initmax1" -e BUFSZ=1000 -e LISTENPORT=20050 -e  
_UsrPar01="key1,ls" -e _UsrPar02="key2,pwd" --init -d zabbix/zabbix-agent:alpine-trunk
```

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VMware monitoring improvements





# VMware monitoring improvements

Various improvements related to VMware data collection and templates

- ▶ Improved VMware event collection by adding memory pagination
- ▶ VMware hypervisor template can now be used as a stand-alone template
- ▶ Added 'Virtual machine hypervisor maintenance status' item to the VMware Guest template

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New and improved built-in macros



# New and improved built-in macros

Zabbix 7.2 introduces new built-in macros and updates support of existing macros

- ▶ **{TIMESTAMP}**, **{EVENT.TIMESTAMP}**, **{EVENT.RECOVERY.TIMESTAMP}**,  
**{EVENT.UPDATE.TIMESTAMP}**, **{EVENT.CAUSE.TIMESTAMP}**, **{ITEM.LOG.TIMESTAMP}**  
resolve to the current time in Unix timestamp format
- ▶ **{EVENT.UPDATE.ACTIONJSON}** resolves to a JSON array containing details of the action(s) performed during a problem update
- ▶ **{SERVICE.ID}** resolves to the numeric ID of the service that triggered the action
- ▶ **{HOST.PORT}** is now supported in the same locations as **{HOST.CONN}**

# New and improved built-in macros

- ▶ Added support for **{FUNCTION.VALUE<1-9>}** and **{FUNCTION.RECOVERY.VALUE<1-9>}** macros to expression macros

More information's and examples:

EN <https://www.initmax.com/new-zabbix-7-2/#support-for-macros-function-value-and-function-recovery-value>

CZ <https://www.initmax.cz/novy-zabbix-7-2/#podpora-maker-function-value-a-function-recovery-value>

# New and improved macros

These macro changes can be utilized in various scenarios:

- ▶ Populating alert messages
- ▶ Item and trigger configuration
- ▶ Map elements and graph names
- ▶ And more

<b>Problem: Application down</b>	
<b>Host</b> Application host - PROD <a href="#">[AppNode1.zabbix.com]</a>	<b>Event time</b> 2024.11.28 14:13:27
<b>Severity</b> High	<b>Opdata</b> 0
<b>Event tags</b> None	<b>UNIXTIME</b> 1732796007
<b>Trigger description</b>	
<a href="#">Open in Zabbix</a>	

# New macro functions

New macro functions:

- ▶ `regrepl` replaces all occurrences, starting with the first one
- ▶ `tr` for complete string transliteration of all occurrences
- ▶ `btoa` PHP method `base64_encode()` is used
- ▶ `urlencode` PHP method `rawurlencode()` is used
- ▶ `htmlencode` PHP method `htmlspecialchars()` is used
- ▶ `urldecode` PHP method `urldecode()` is used
- ▶ `htmldecode` converts HTML entities back to their characters
- ▶ `lowercase` all letters are converted to lowercase
- ▶ `uppercase` all letters are converted to uppercase

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New templates and updates



# New templates

- ▶ Various templates for LAMP stack monitoring by Zabbix agent active
- ▶ NVIDIA GPU
- ▶ Juniper MX series
- ▶ Huawei OceanStor V6 Dorado
- ▶ Nutanix Prism Element



# Template updates

Various templates now support Zabbix agent 2 active mode

Updated existing templates:

- ▶ Dell iDrac and PowerEdge updated to use SNMP walk items
- ▶ Proxmox VE by HTTP – new disk space usage items/triggers
- ▶ MSSQL by ODBC performance counter query fixes
- ▶ Linux and Nextcloud – removed unnecessary discard unchanged preprocessing from LLD rules
- ▶ Microsoft 365 reports by HTTP description fixes

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API - Removed support for deprecated property auth.



# Removed support for deprecated property auth.

Removed support for deprecated property auth.

```
{  
  "jsonrpc": "2.0",  
  "method": "host.get",  
  "params": {  
    "output": [  
      "hostid",  
      "host"  
    ]  
  },  
  "id": 2,  
  "auth": "0424bd59b807674191e7d77572075f33"  
}
```

# Removed support for deprecated property auth.

To access any data in Zabbix, you need to either:

- ▶ use an existing API token (created in Zabbix frontend or using the Token API);

```
curl --request POST \  
  --url 'https://example.com/zabbix/api_jsonrpc.php' \  
  --header 'Authorization: Bearer 0424bd59b807674191e7d77572075f33'
```

- ▶ use an authentication token obtained with the user.login method.

```
curl --request POST \  
  --url 'https://example.com/zabbix/api_jsonrpc.php' \  
  --header 'Content-Type: application/json-rpc' \  
  --data  
'{"jsonrpc":"2.0","method":"user.login","params":{"username":"Admin","password":"zabbix"},"id":1  
'
```

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Additional changes and improvements



# Additional changes and improvements

- ▶ Added support for CP\_SPIN cpu state on OpenBSD
- ▶ Implemented new column configuration options in Top hosts widget and support for binary item display
- ▶ Added support for LLD Macro {#UNIT.SERVICETYPE} in systemd.unit.discovery for Zabbix agent 2
- ▶ Updated maximum supported TimescaleDB version to 2.17
- ▶ Updated maximum supported PostgreSQL version to 17
- ▶ Made items become unsupported when there are no pollers
- ▶ Removed support of Oracle as a backend DB
- ▶ Added support of logarithmic Y-axis scaling in graphs
- ▶ Enabled usage of the mediatype.get method for users with the User role with a limited field scope

# Additional changes and improvements

- › Implemented automatic selection of the first element of a broadcast-capable widget
- › Implemented a new filter in media type list view to filter out media types by their usage in action
- › The Clock widget now auto-adjusts element sizes and simplifies setup by removing manual size settings
- › Oracle monitoring now supports bind variables, improving query performance and reducing database load

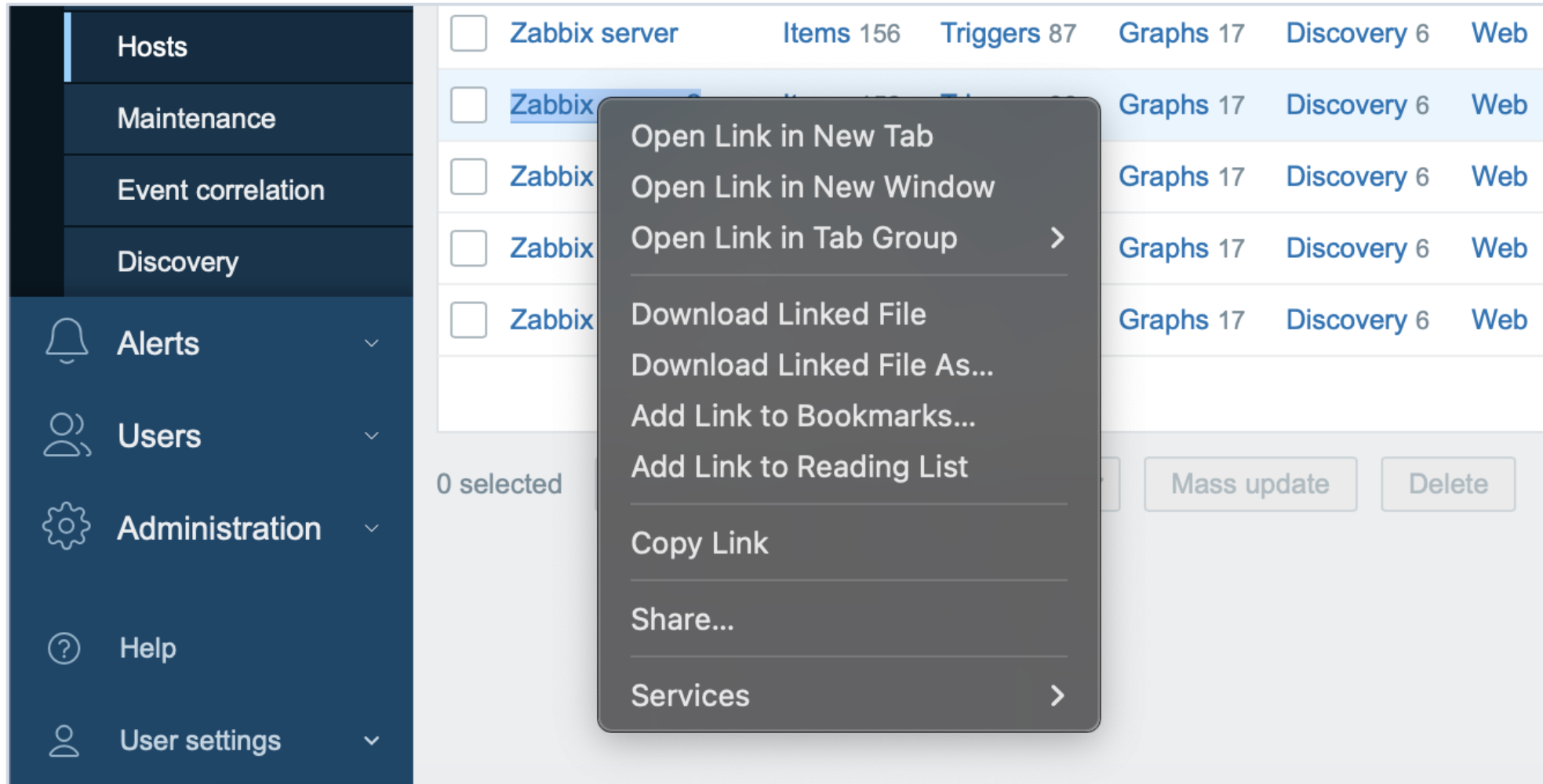
## **Modal forms now have their own link:**

- › Implemented for host, item, trigger and other modal forms
- › Makes possible to link directly to the item or trigger in problem-related notification messages or share a link
- › If opened in a new tab, the form is opened on a gray background

## **A modal form link example:**

- › `/zabbix.php?action=popup&popup=item.edit&context=host&itemid=42243`

# Additional changes and improvements

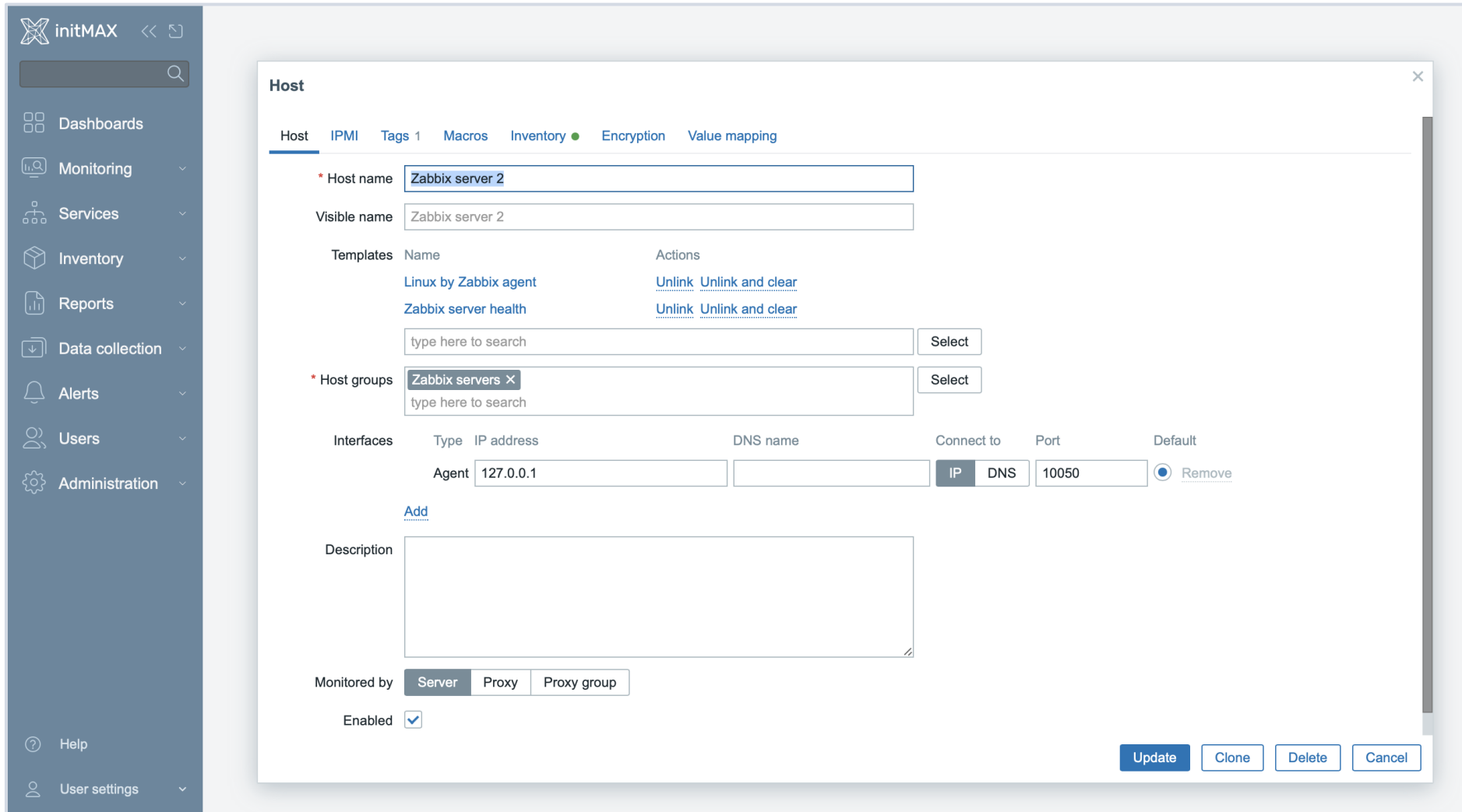


The screenshot displays the Zabbix 7.2 web interface. On the left is a dark blue sidebar with navigation items: Hosts, Maintenance, Event correlation, Discovery, Alerts, Users, Administration, Help, and User settings. The main content area shows a table of hosts. The first row is 'Zabbix server' with 156 items, 87 triggers, 17 graphs, 6 discoveries, and a 'Web' link. A context menu is open over the 'Web' link of the second row, listing options such as 'Open Link in New Tab', 'Download Linked File', and 'Copy Link'. At the bottom of the host list, there are buttons for 'Mass update' and 'Delete'.

Host	Items	Triggers	Graphs	Discovery	Web
<input type="checkbox"/> Zabbix server	156	87	17	6	Web
<input type="checkbox"/> Zabbix			17	6	Web
<input type="checkbox"/> Zabbix			17	6	Web
<input type="checkbox"/> Zabbix			17	6	Web
<input type="checkbox"/> Zabbix			17	6	Web



# Additional changes and improvements



The screenshot displays the Zabbix 7.2 initMAX interface. On the left is a dark sidebar with navigation icons and labels: Dashboards, Monitoring, Services, Inventory, Reports, Data collection, Alerts, Users, Administration, Help, and User settings. The main content area shows the 'Host' configuration window. At the top, there are tabs for Host, IPMI, Tags 1, Macros, Inventory (active), Encryption, and Value mapping. The 'Host' tab is selected, showing the following fields and options:

- Host name:** Zabbix server 2
- Visible name:** Zabbix server 2
- Templates:** A table with columns 'Name' and 'Actions'.

Name	Actions
Linux by Zabbix agent	<a href="#">Unlink</a> <a href="#">Unlink and clear</a>
Zabbix server health	<a href="#">Unlink</a> <a href="#">Unlink and clear</a>
- Host groups:** Zabbix servers (with a close icon) and a search input.
- Interfaces:** A table with columns 'Type', 'IP address', 'DNS name', 'Connect to', 'Port', and 'Default'.

Type	IP address	DNS name	Connect to	Port	Default
Agent	127.0.0.1		IP DNS	10050	<input checked="" type="radio"/> Remove
- Description:** A large text area.
- Monitored by:** Server (selected), Proxy, Proxy group
- Enabled:**

At the bottom right of the configuration window are buttons for Update, Clone, Delete, and Cancel.

**Demo**





**Questions?**

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