

ZABBIX, CLOUD, FREEDOM

ZABBIX

SUMMIT
2024



Alexei Vladishev

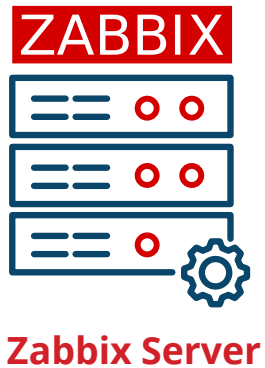
Founder and CEO,
Zabbix



We help businesses deliver flawless
services for a
better world and happier people

We want to be **100%** focused on
monitoring and our systems

In reality...



Dealing with upgrades

Keeping Zabbix up-to-date

Applying security patches

Performance tuning

Database related tuning, partitioning

Backups

Zabbix Cloud! 🎉 🎉 🎉



Enterprise SaaS 7 tiers 5 regions



7 tiers for various needs

From SMBs to large enterprises

Nano: 50 NVPS, Micro: 100 NVPS, Small: 250 NVSP

Medium: 1K NVPS

Large: 2.5K NVPS, xLarge: 5K NVPS, 2xLarge: 10K NVPS

zabbix.com/cloud



Starts with **50\$** per month

No per metric, host, users, whatever fees!

zabbix.com/cloud

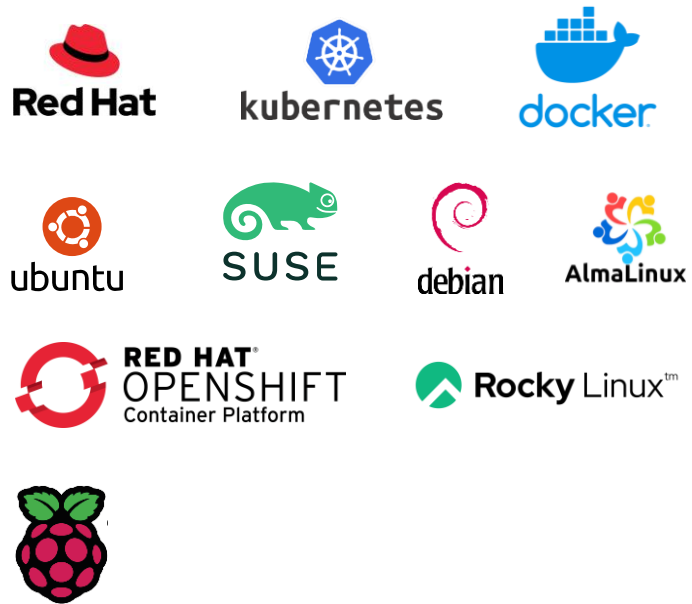


10GB are free forever

0.3\$ per extra GB per month

zabbix.com/cloud

ON-PREMISES



IN THE CLOUD



Zabbix Cloud (SaaS)





Zabbix Cloud

Automatic upgrades and security patches

Automatic and on-request backups

Scale as you grow

Secure

Low TCO, no hidden cost

Fixed pricing for different levels of performance (NVPS) and storage requirements



Perfect for hybrid use

A combination with Zabbix Proxies

zabbix.com/cloud



Great solution for MSPs

Run Zabbix instance per customer

zabbix.com/cloud

How to start?

Go to:

zabbix.com/cloud

The screenshot shows the Zabbix Cloud Account login interface. At the top left is the ZABBIX logo with a cloud icon. The main heading is "Log in to your Zabbix Cloud Account". Below this are two input fields: the first contains the email "john.doe@zabbix.com" and the second contains a masked password "....." with an eye icon to toggle visibility. There are two checkboxes: "Remember me" (checked) and "Forgot password?". A blue "Log in" button is positioned below the form. At the bottom, there is a link: "Don't have an account? Sign up".

To the right of the login form is a light blue sidebar listing four features:

- 5 regions**: Select from 5 regions and choose the data center that best fits your organization. (Icon: globe)
- 7 tiers**: Pick a tier that fits your budget and monitoring requirements. (Icon: stacked layers)
- Unlimited metrics**: Zabbix Cloud does not limit the type and number of metrics you can collect. (Icon: bar chart)
- Automatic updates**: It is our responsibility to keep your instances up to date and patched. (Icon: gear with upward arrow)

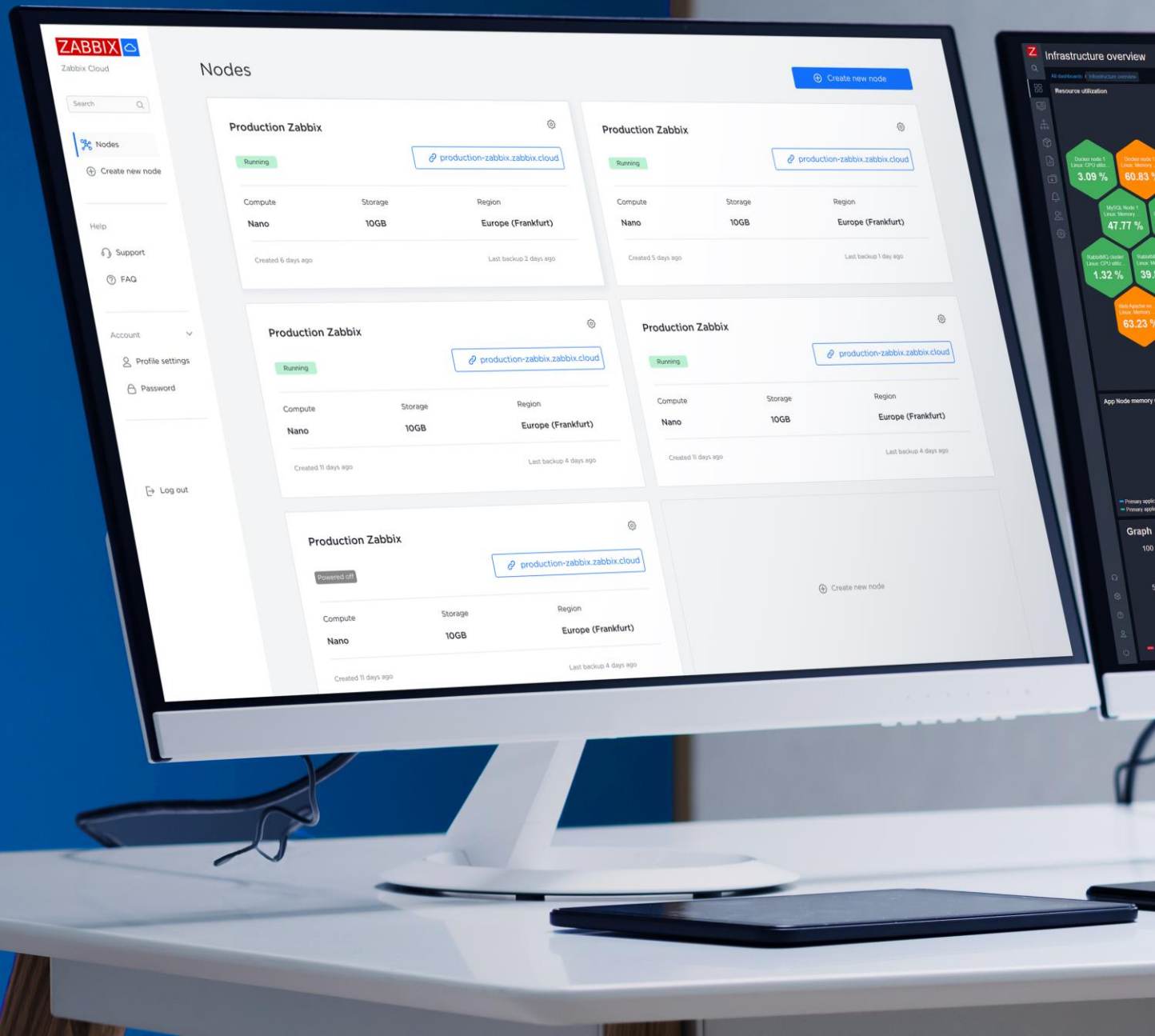
At the bottom of the sidebar, there are two dots, with the second dot being blue, indicating the current position in the list.

ZABBIX 7.0

A GREAT COMBO!

ZABBIX

Zabbix in the Cloud



Zabbix 7.0 LTS

More than 110 new features and improvements

Staying open-source

An inclusive solution

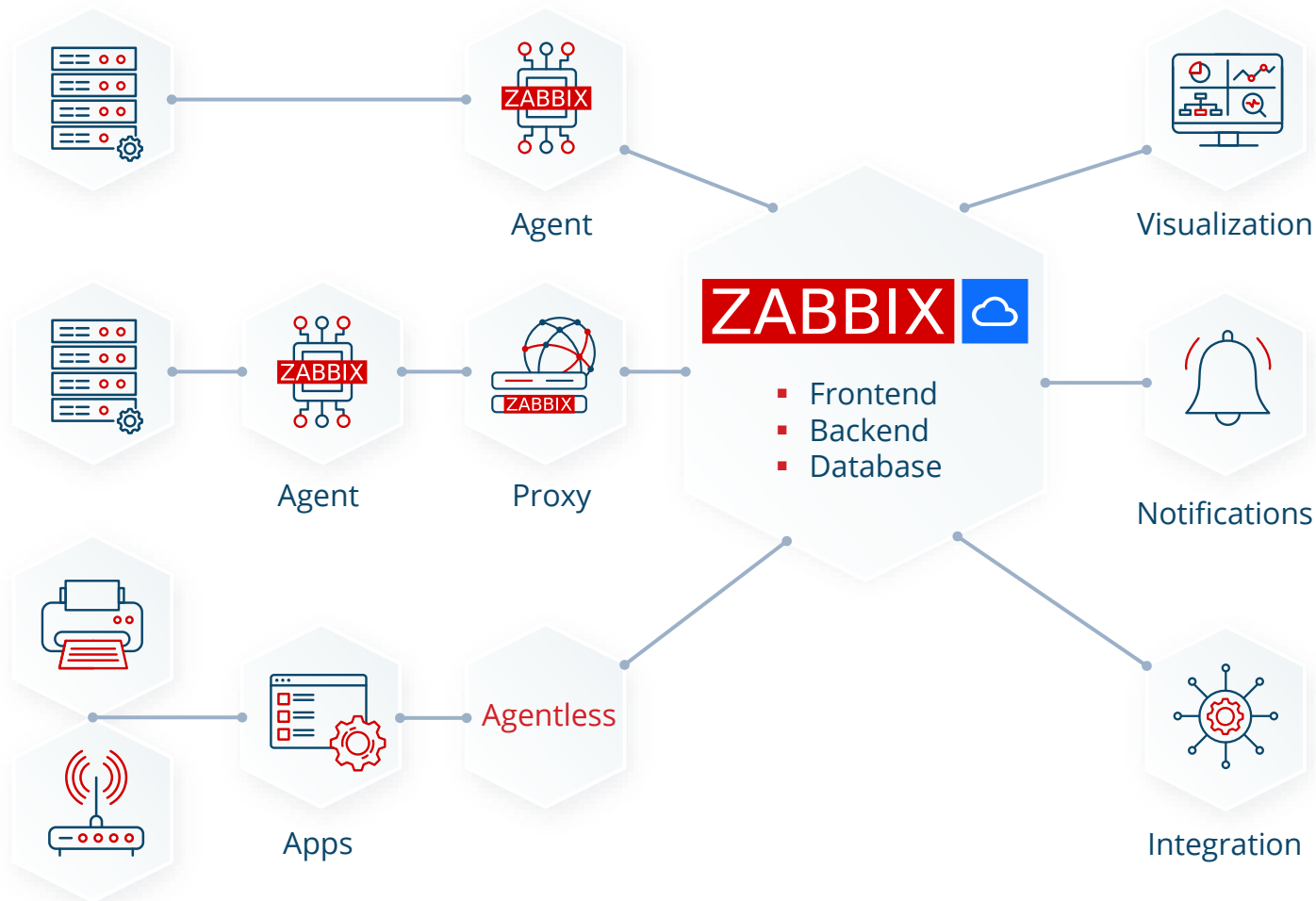
GPLv2 -> AGPLv3

Does it make any difference?

An all-in-one solution

One product to cover it all

Collect → Analyze → React and Visualize



High-quality data, also for AIOps

Proxies for DM and Edge computing



































































































































API for automation and integrations

Auto-remediation

Anomaly detection

All levels: from infrastructure to business

IT & OT
Business services
SLA/SLI
Synthetic
Cloud
K8S
OpenShift
Containers
APIs
WEB
User experience
Applications
Processes
OS
Environment
Hardware
Industrial
Network devices
IoT and sensor data

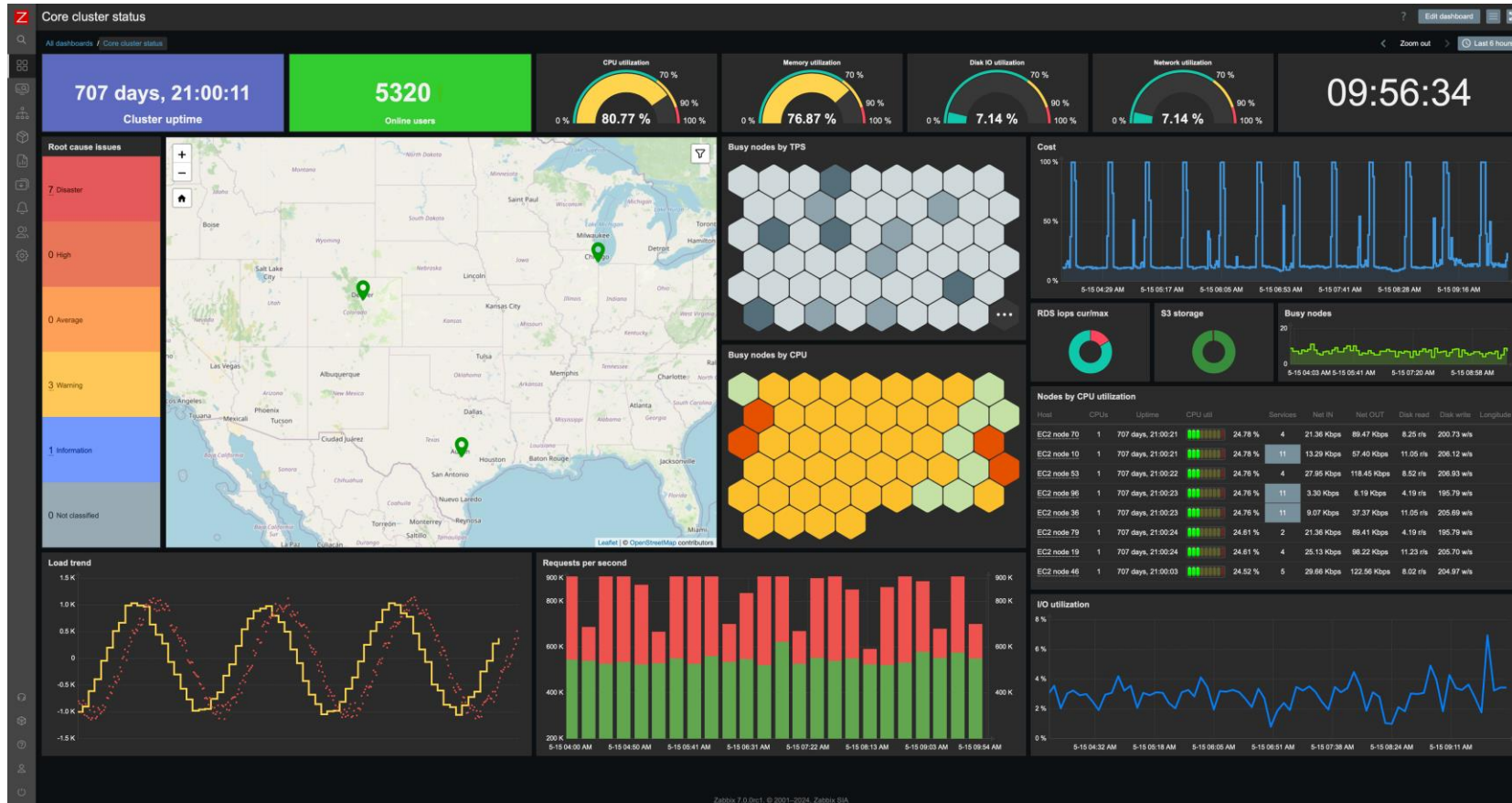
 NET	 IC-Предприятие	 Active Directory	 ActiveMQ	 Alcatel Lucent	 Cloudstack	 ClusterControl	 Confluence	 Cooling	 CoreOS	 HTTP	 HTTPS	 Huawei
 Alerta	 Android	 Ansible	 Antivirus	 Apache	 Couchbase	 cPanel	 D-Link	 Database monitoring	 Datacom	 IBM AIX	 IBM AS/400	 IBM MQ
 APC	 Appdynamics	 Application monitoring	 Arduino	 Arista	 DB2	 Debian	 Dell	 DNS	 Docker	 Ingress	 Intel	 InterSystems
 Aruba	 Asterisk	 Avaya	 AWS	 AWS CloudWatch	 Drupal	 Elasticsearch	 Eltex	 EMC	 Emerson	 IRC	 Jabber	 JasperReports
 AWS EC2	 AWS S3	 Backup	 Bacula	 Barracuda	 Exim	 Extreme Networks	 F5 Networks	 Facebook Messenger	 Fedora	 JBoss	 Jenkins	 Jira
 Bigpanda	 Blue Coat	 BMC Remedy	 BorgBackup	 Brocade	 firebird	 Firewalls	 Flowdock	 Fortinet	 FreeBSD	 Julia	 Juniper	 Kafka
 Buffalo	 Bugzilla	 C#	 Capacity planning	 Cassandra	 FreshDesk	 Fujitsu Siemens	 Galera cluster	 Geckboard	 Git	 Kubernetes	 KVM	 Kyocera
 Centos	 Ceph	 Check Point	 Chef	 Chrome extension	 Glassfish	 GLPI	 Go	 Google Apps	 Google Cloud	 Lenovo	 Lexmark	 Lighttpd
 Cisco	 Citrix	 Cloud Foundry	 Cloud monitoring	 Cloudera	 Google Maps	 Grafana	 Graylog	 Hadoop	 HAPROXY	 Logstash	 Lucidworks	 LXC
 Cloudstack	 ClusterControl	 Confluence	 Cooling	 CoreOS	 High Availability	 Hipchat	 Hitachi HDS, HNAS	 HP Enterprise	 HP-UX	 Mattermost	 Mellanox	 Memcached

zabbix.com/integrations

A single pane of glass

Total visibility and transparency

Visualization and reporting



Zabbix 7.0 LTS

All widgets for host and global dashboards and reporting

Stable framework for widget devs

A new set of advanced widgets

Dynamic dashboards for drill-down and specific use cases

New widgets for real-time viewing and reporting

Core widgets

Pie & donut charts

Gauge charts

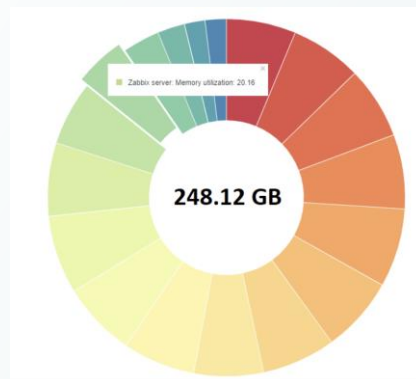
Item history



Reporting

Capacity reports

Management reports



Widgets navigators

Host navigator

Item navigator

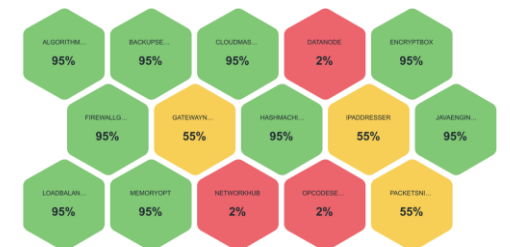
Countries	
▶ Estonia	12 105
▼ Germany	3 3
Berlin	3 3
▶ Latvia	9 103
▶ USA	12 105

Advanced visualization

Honeycombs

Service trees

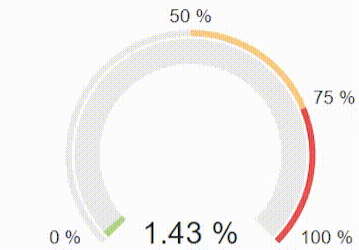
Topology



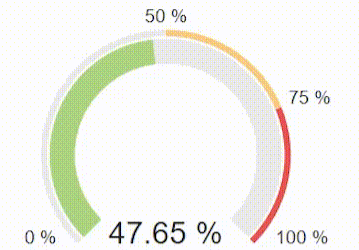
Resource utilization



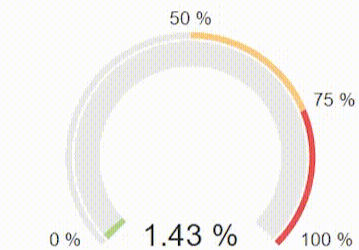
MySQL Node 1: Linux: CPU utilization



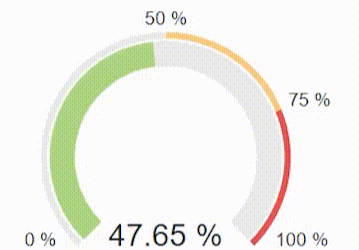
MySQL Node 1: Linux: Memory utilization



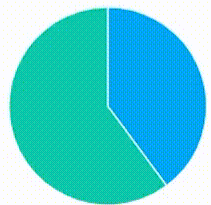
MySQL Node 1: Linux: CPU utilization



MySQL Node 1: Linux: Memory utilization

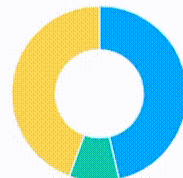


App Node memory usage



Category	Value
Primary application node: Linux: Total memory	3.56 GB
Primary application node: Linux: Available memory	2.14 GB

App Node CPU time

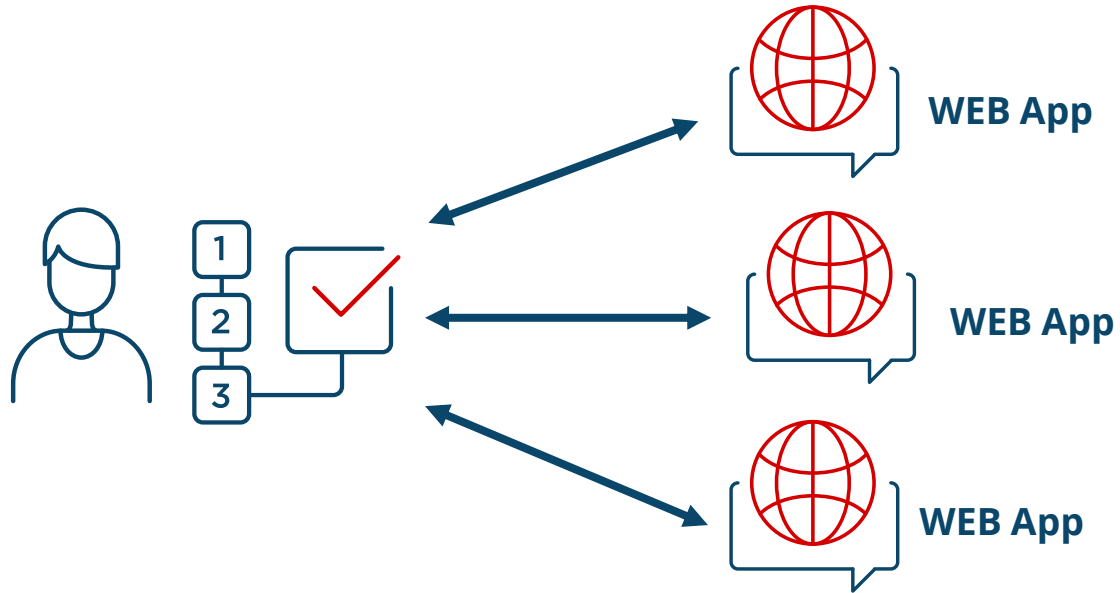


Category	Value
Primary application node: Linux: CPU user time	0.4958 %
Primary application node: Linux: CPU iowait time	0.09843 %
Primary application node: Linux: CPU system time	0.4745 %

Top hosts

Host	CPU Utilization	Memory Utilization
Docker node 2	3.09 %	70.98 %
Docker node 1	3.09 %	60.83 %
Docker node 3	2.77 %	72.33 %
Web Nginx node 1	2.04 %	78.84 %
Web Apache node 1	1.93 %	57.73 %
Web Nginx node 2	1.93 %	47.55 %
Primary application node	1.88 %	44.50 %
Web Apache node 2	1.85 %	63.23 %
MySQL Node 2	1.48 %	65.38 %
MySQL Node 1	1.43 %	47.65 %

End-user synthetic WEB monitoring



Monitoring user experience

End-user experience monitoring for WEB apps

Business scenario monitoring

Multi-step complex monitoring scenario with IF/THEN logic

Get a screenshot of each step

Monitoring of performance, availability and content

New item

Item Tags Preprocessing

* Name My WEB application

Type Browser

* Key app.webperf

Type of information Text

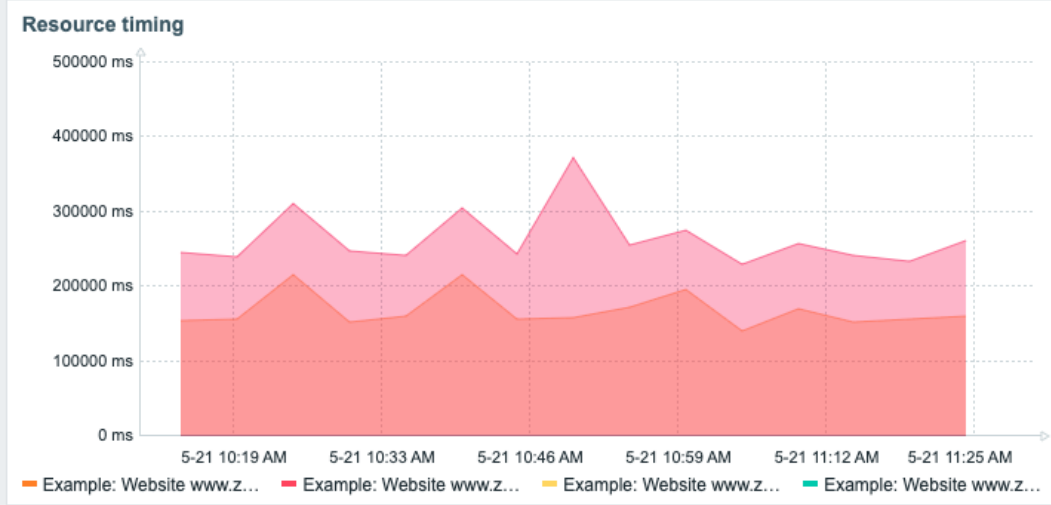
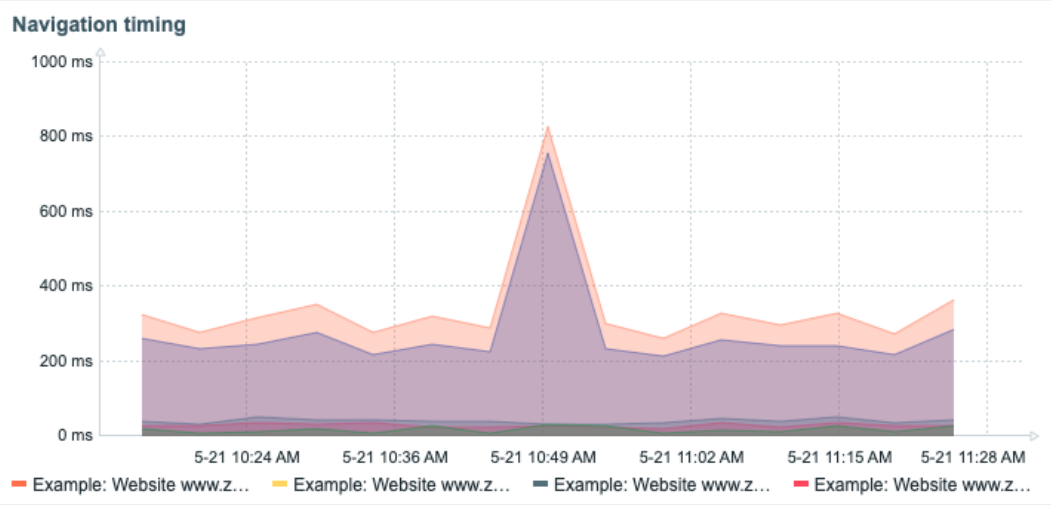
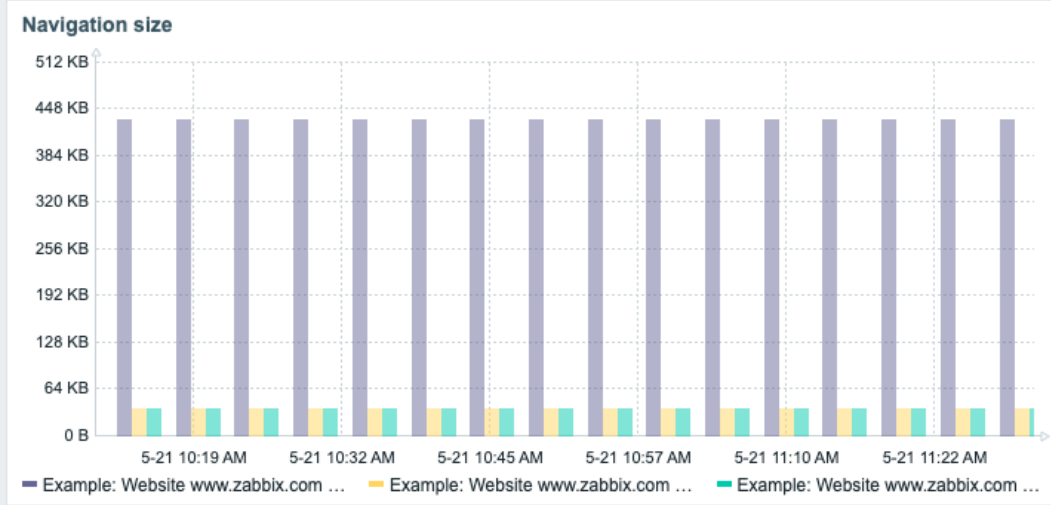
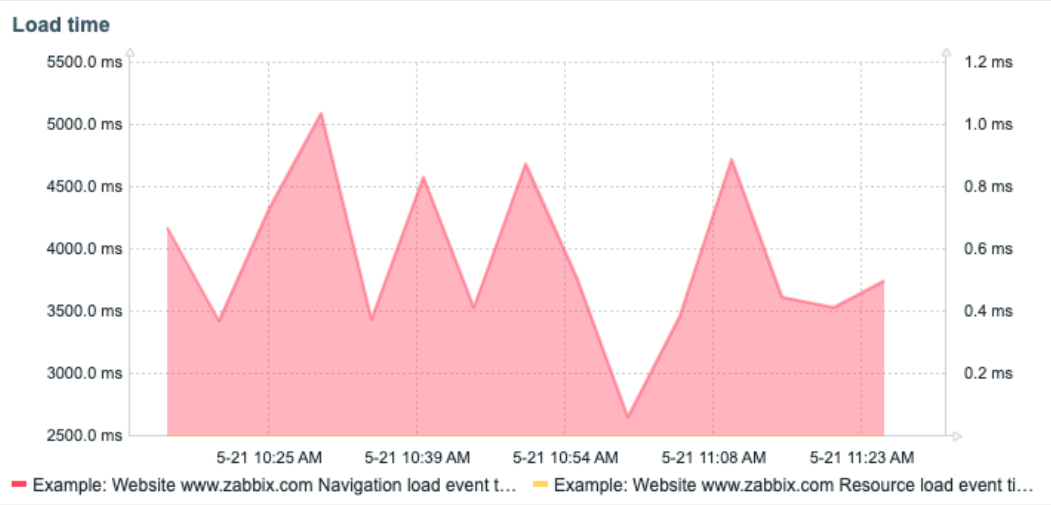
Name	Value	Action
		Remove

* Script `var browser = new Browser(Browser.chromeOptions());...`



End-user synthetic WEB monitoring

Timestamp	Screenshot
2024-05-21 11:45:05 AM	
2024-05-21 11:40:06 AM	
2024-05-21 11:35:05 AM	
2024-05-21 11:30:05 AM	
2024-05-21 11:25:05 AM	
2024-05-21 11:20:05 AM	
2024-05-21 11:15:04 AM	
2024-05-21 11:10:07 AM	
2024-05-21 11:05:04 AM	



A single pane of glass

Dashboards

Scheduled PDF reporting

Business service monitoring (BSM)

User roles

Metric processing

Data processing

APM and tracing functionality

OpenTelemetry

Topology data

Processing of streaming data

Tracing, events, logs, binary

Visualization and reporting

Visualization of complex data: tracing, flows, etc

Widgets for advanced visualization

Massive usability improvements of Zabbix UI

Custom UI for any use case

Framework for widget development

Zabbix 7.0 LTS

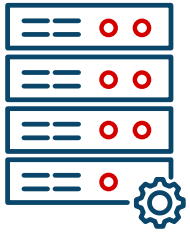
Zabbix 8.0 LTS

Proxy load balancing

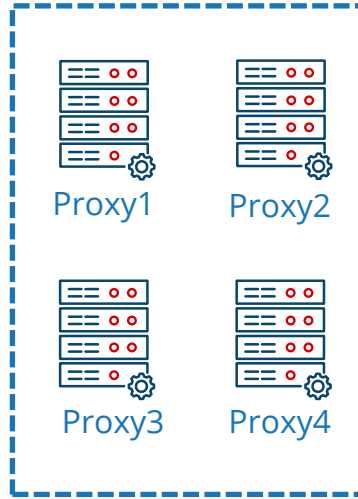
The functionality we have been waiting for

Proxy load balancing and HA

ZABBIX 



Zabbix 7.0 Server

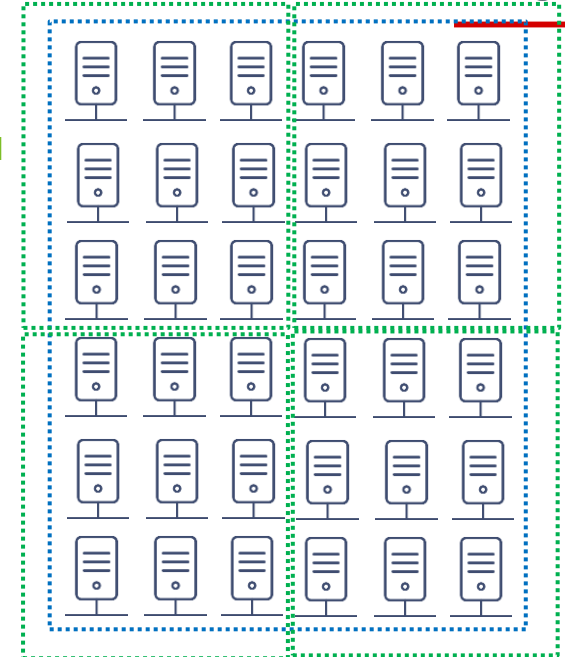


Proxy HA
Group1



Proxy1

Proxy2



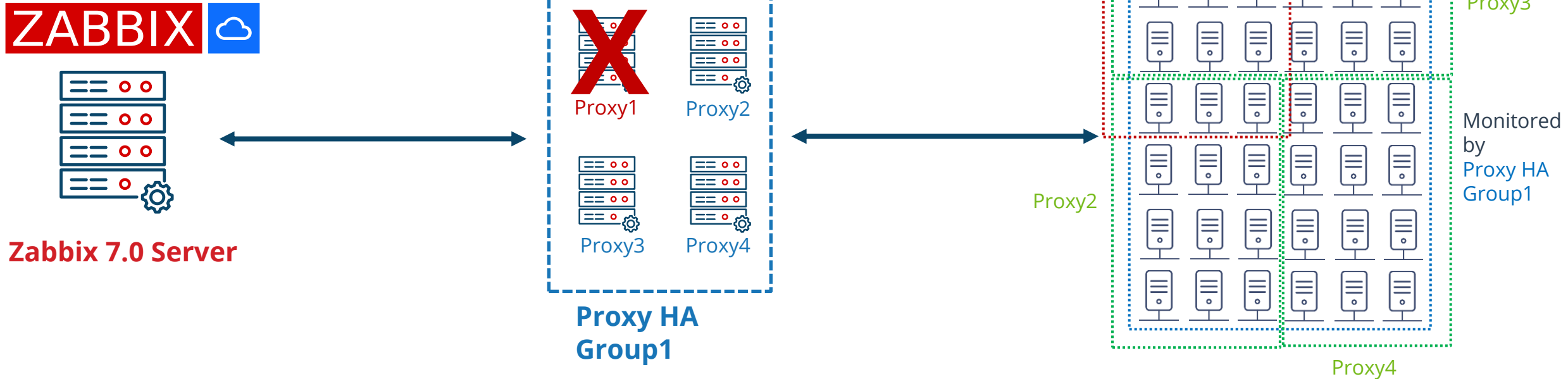
Proxy3

Proxy4

Monitored
by
Proxy HA
Group1

Automatic distribution
of hosts

Proxy load balancing and HA



High availability of proxies

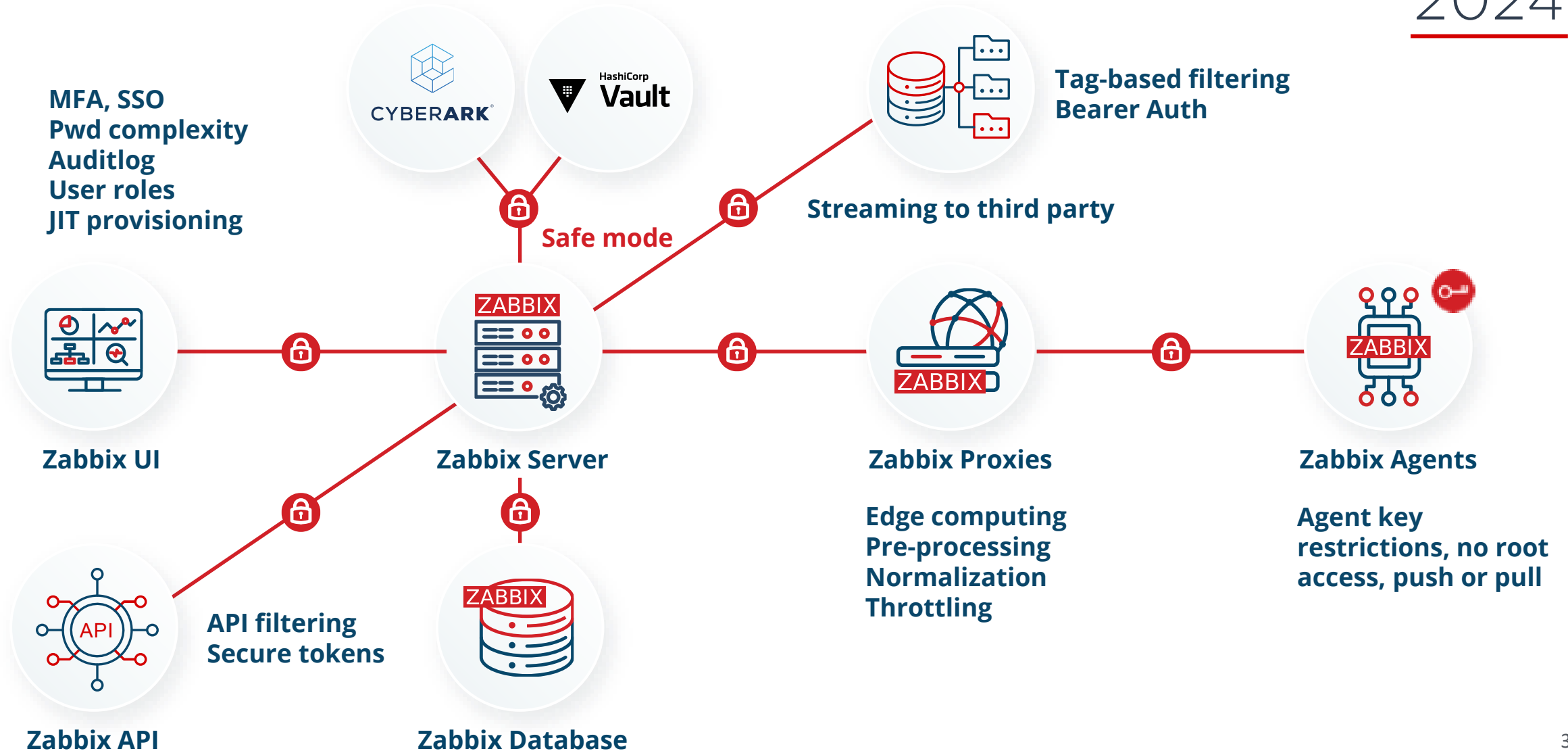
Load balancing: automatic distribution of hosts across a group of proxies

Auto-scaling of proxies in a K8S environment

Quality and security

Our top priority

The highest security standards



Enterprise grade MFA

Time-Based One-Time Password authentication

Duo Universal Prompt authentication

Scan this QR code

Please scan and get your verification code displayed in your authenticator app.



Unable to scan? You can use SHA1 secret key to manually configure your authenticator app:
BBK2557F77D25HNDIZZSW6QYKPKPG5

Verification code

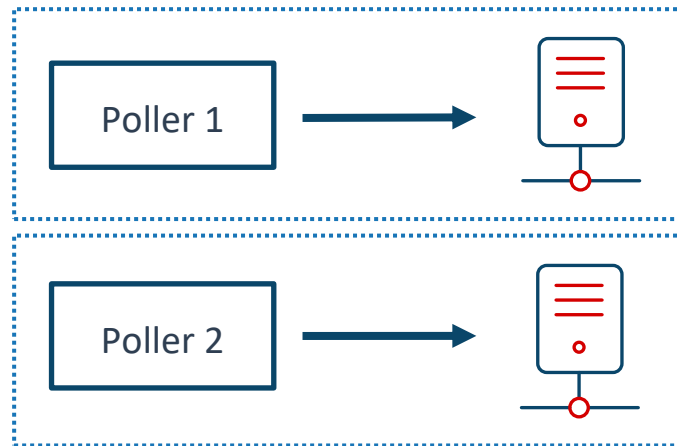
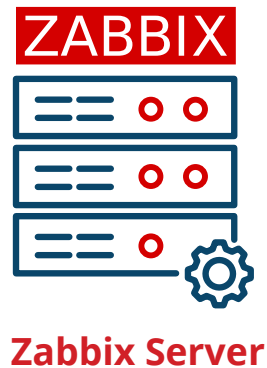
Sign in

Scalability and performance

Lower TCO

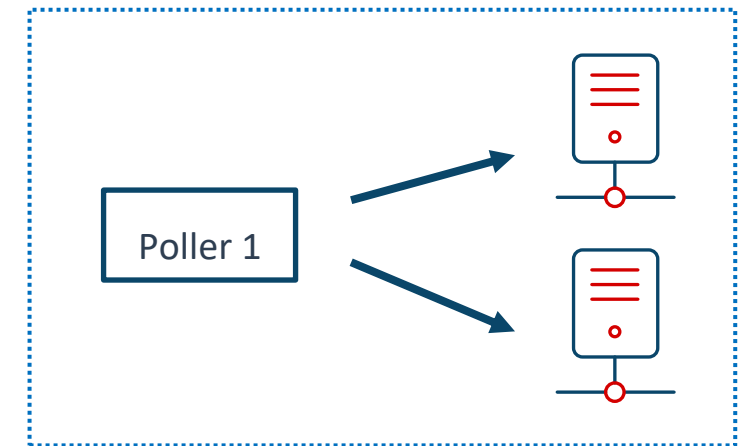
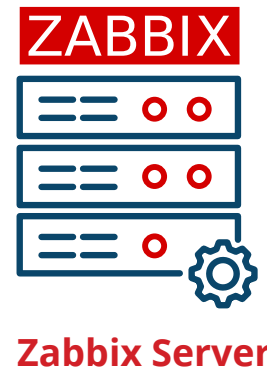
Performance: transition to async & threads

Before



One connection per poller

7.0 LTS



Thousands of connections per poller

One poller/discoverer to handle **thousands of connections**

Much lower resource usage = lower costs and energy use

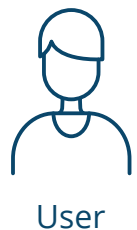
Enables **auto-scaling** in the future

Performance: faster front-end for larger scale

Before



← 0.2s

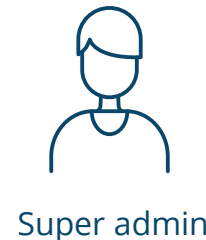


← 2-3s
(too much!)



7.0 LTS

→ 0.2s



Super admin

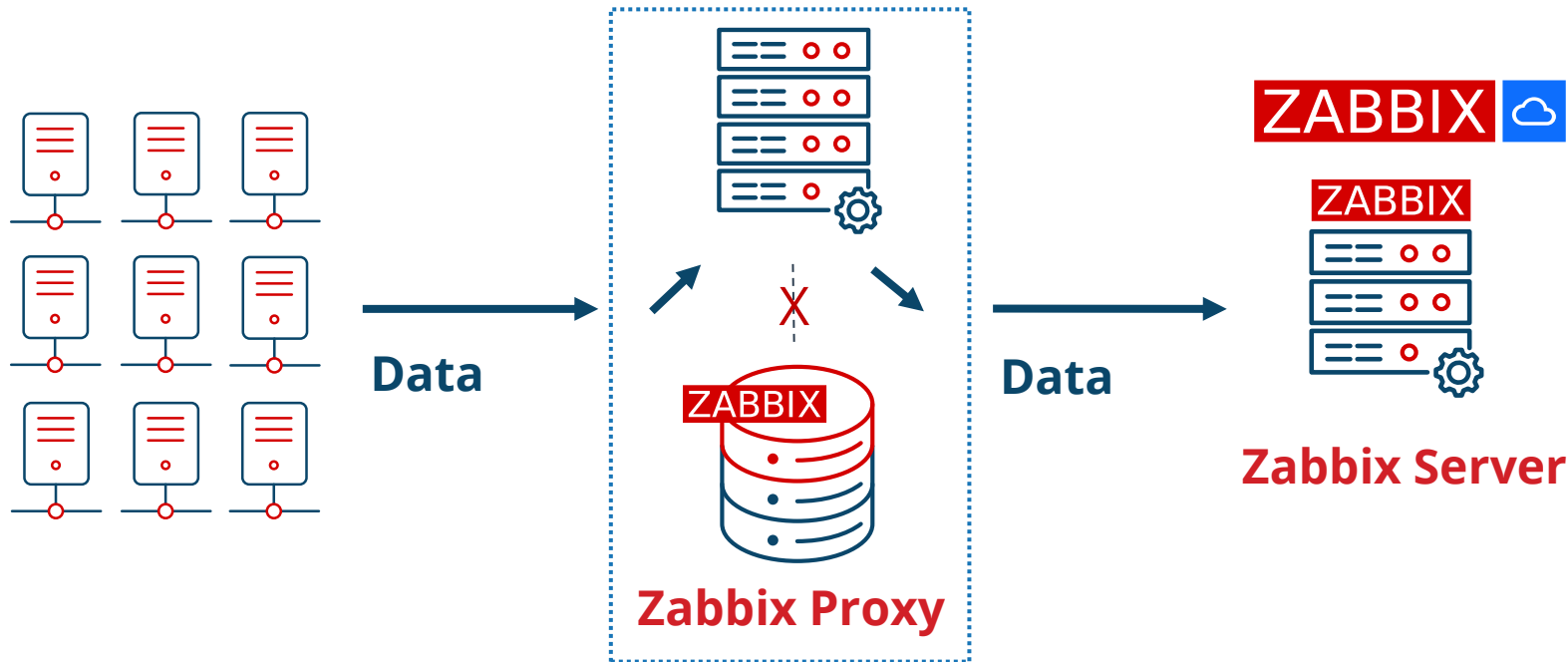
→ 0.2-0.3s



User

10x faster Zabbix UI for non-superadmins

In-memory data collection mode for proxies

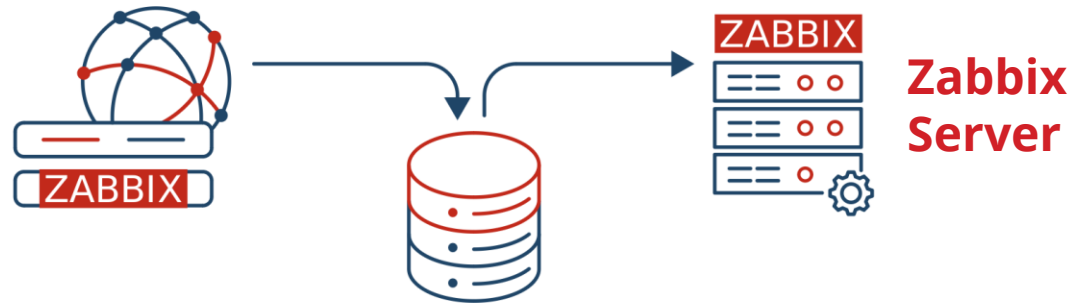


Less IOPS
Faster
Cheaper
Less energy



Various modes

Disk
mode



Memory
mode



Hybrid
mode



Centralized management of ITEM timeouts

- GUI
- Autoregistration
- Timeouts**
- Images
- Icon mapping
- Regular expressions
- Trigger displaying options
- Geographical maps
- Modules
- Connectors
- Other

Timeouts for item types

- * Zabbix agent 4s
- * Simple check 4s
- * SNMP agent 4s
- * External check 4s
- * Database monitor 4s
- * HTTP agent 4s
- * SSH agent 4s
- * TELNET agent 4s
- * Script 4s

Network timeouts for UI

- * Communication 3s
- * Connection 3s
- * Media type test 65s
- * Script execution 60s
- * Item test 60s
- * Scheduled report test 60s

Proxy Encryption Timeouts

Timeouts for item types Global Override Global timeouts

- * Zabbix agent 4s
- * Simple check 4s
- * SNMP agent 4s
- * External check 4s
- * Database monitor 4s
- * HTTP agent 4s
- * SSH agent 4s
- * TELNET agent 4s
- * Script 4s

Custom intervals

Type	Interval
<input checked="" type="radio"/> Flexible <input type="radio"/> Scheduling	50s
<input type="button" value="Add"/>	
<input checked="" type="radio"/> Timeout	3s <input type="button" value="Change Timeouts"/>
* History storage period	<input type="radio"/> Do not keep history <input checked="" type="radio"/> Storage period 7d

Global

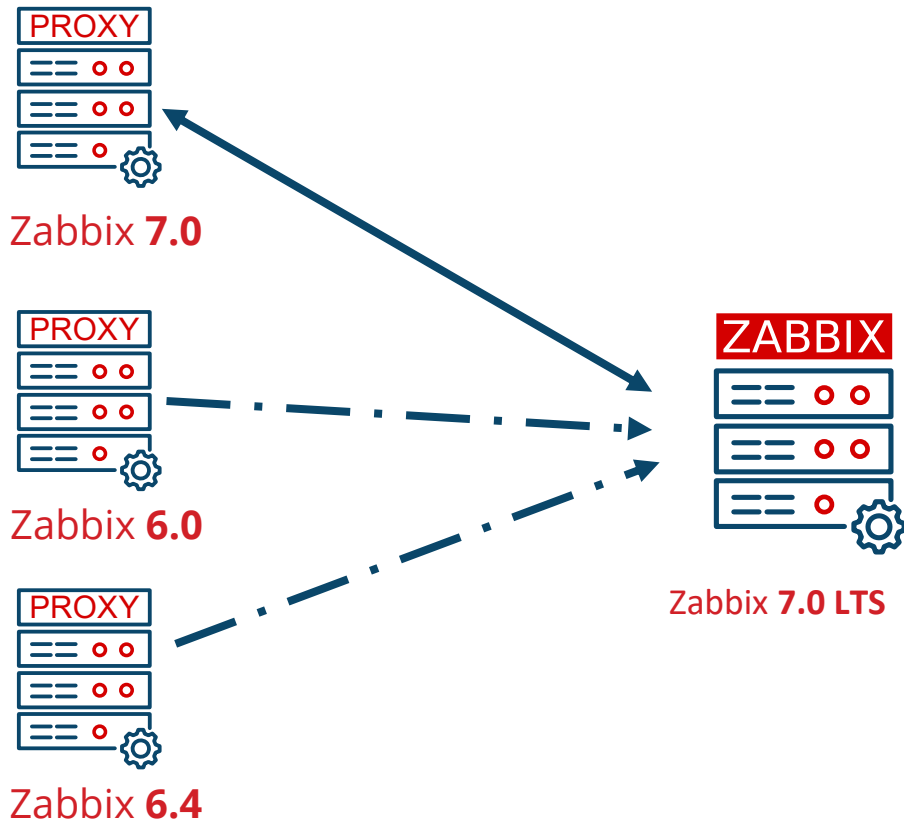
Proxy

Item

Global, proxy, and item-level timeouts managed from Zabbix UI

More secure - no need to deal with *.conf

Zero-downtime upgrade of proxies



<input type="checkbox"/>	Name ▲	Mode	Encryption	Version	Last seen (age)	Host count
<input type="checkbox"/>	proxy-dmz	Passive	PSK	6.4.0 <i>i</i>	0	153

Proxy version is outdated, only data collection and remote execution is available with server version 7.0.0.

Zabbix 6.4:

Older proxies will **continue to process data**

Creates a longer **time window** for upgrade

You can observe versions of your proxies in UI

Pushing metrics to Zabbix

Integrate your scripts and applications with Zabbix



Advanced DNS monitoring

net.dns.get

net.dns.perf

DNS and DNSSEC

response time

availability

DNS record details

```
{
  "answer_section": [
    {
      "class": "IN",
      "name": "example.com.",
      "rdata": {
        "expire": 1209600,
        "mbox": "noc.dns.example.org.",
        "minttl": 3600,
        "ns": "ns.example.org.",
        "refresh": 7200,
        "retry": 3600,
        "serial": 2022091378
      },
      "rdlength": 44,
      "ttl": 1205,
      "type": "SOA"
    }
  ],
  "flags": [
    "RA"
  ],
  "query_time": "0.02",
}
```

Python library zabbix_utils

pip install Zabbix_utils

```
# Use an authentication token generated via the web interface or
# API instead of standard authentication by username and password.
ZABBIX_AUTH = {
    "url": "127.0.0.1",
    "token": "8jF7sGh2Rp4TlQ1ZmXo0uYv3Bc6AiD9E"
}

# Create an instance of the ZabbixAPI class with the specified authentication details
api = ZabbixAPI(**ZABBIX_AUTH)


# Retrieve a list of users, including their user ID and name
users = api.user.get(
    output=['userid', 'name']
)

# Print the names of the retrieved users
for user in users:
    print(user['name'])
```

Install or Upgrade to Zabbix 7.0 LTS

Zabbix Packages Download and install Zabbix for free	Zabbix Cloud Available with a 5-day free trial	Third-Party cloud vendors Run Zabbix on third-party cloud platforms	Zabbix Containers Deploy Zabbix components from official Zabbix containers	Zabbix Appliance Run Zabbix from a pre-configured Zabbix virtual appliance	Zabbix Agents Download Zabbix agent for Unix-like and Windows environments
--------------------------------------------------------------------	--------------------------------------------------------------	-----------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------

zabbix.com/download







Explore Zabbix Cloud with a 5-day free trial

Scale as you go with Zabbix Cloud!

Deploy your own Zabbix environment with just a few clicks and set up distributed monitoring in regions all around the globe.

[Try Zabbix Cloud](#)

-  **5 regions**
Choose the data center that's closest to your organization
-  **7 tiers**
Pick the tier that fits your budget and monitoring requirements
-  **Peak performance**
Every Zabbix Cloud instance is tuned to ensure the best possible performance
-  **Automatic updates**
Get a hassle-free upgrade to the latest Zabbix version

Zabbix 7.2

Evolution, not revolution

7.2 (In Progress)

ZBXNEXT-7689 Top items widget

ZBXNEXT-9199 Top hosts improvements

ZBXNEXT-599 Logarithmic Y axis for graphs

ZBXNEXT-2122 Users can manage own medias

ZBXNEXT-9319 Dashboard WYSIWYG

ZBXNEXT-9208 New macro and web scenario functions

ZBXNEXT-8784, 8785, 9420 Network map improvements

Oracle removed 🤔

7.2 (R&D)

Event correlation

Runtime context cache

OAuth 2.0 for SMTP

JS macro API

GPU monitoring

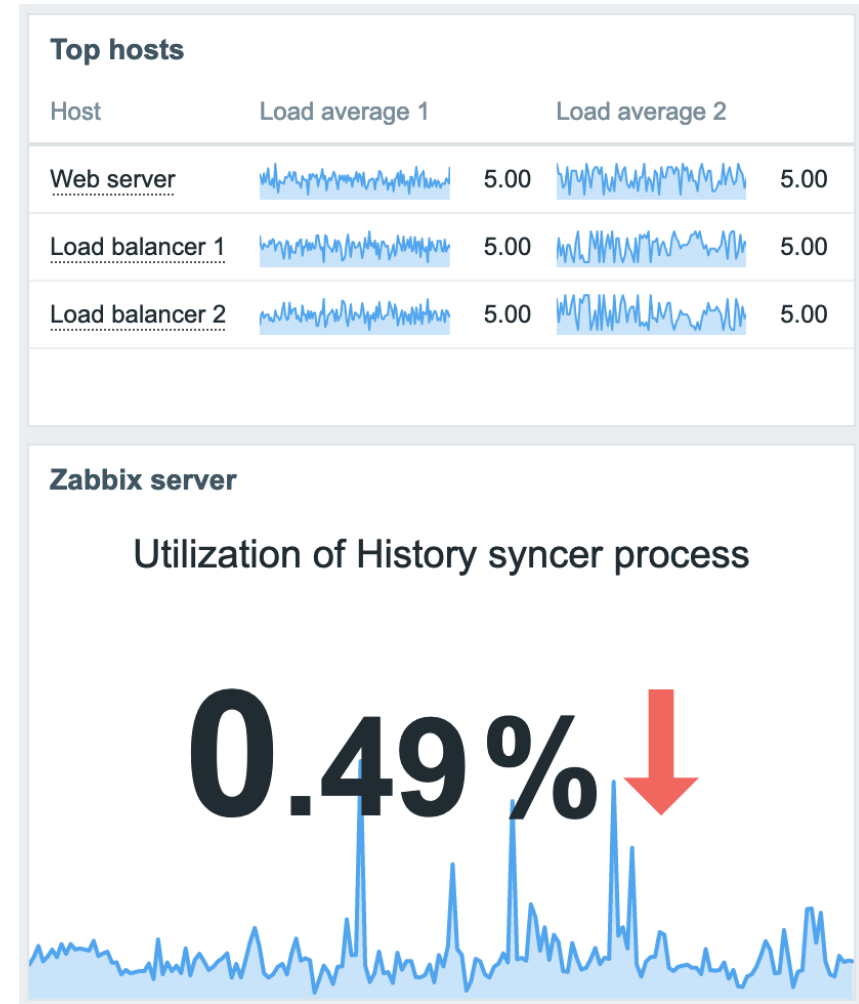
The screenshot shows a Zabbix Host card for a host named 'Zabbix server'. The host is currently 'Disabled'. The card includes a description: 'This is dummy host used for testing and developments purposes within the example.com network.' It lists host groups as 'Linux servers, Application servers'. There are four status indicators: a grid icon with '2', a document icon with '2', a bar chart icon with '0', and a globe icon with '3'. The availability section shows 'ZBX' in green, 'IPMI' in red, and 'JMX' in grey. The host is monitored by 'Zabbix server'. Templates include 'SpecialOne (Linux by Zabbix agent)' and 'SpecialTwo (Linux by SNMP)'. The inventory section shows: Type: linux host; OS: Linux version 6.5.0-25-generic...; Serial Number A: 1155600023; MAC Address A: 12:77:22:51:36:21. At the bottom, there are tags: component: network, server:isolated, software:linux, class:os, process:conversion, component: network, and a more options icon.

7.2

Prepare codebase for bigger changes

Normalize release schedule after 7.0

Release date: End of 2024



ZABBIX

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2024

THANK YOU
AND ENJOY ZABBIX



Alexei Vladishev

Founder and CEO,
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