



## RETHINKING ZABBIX

**Alexei Vladishev**

Founder & CEO



# 10th Zabbix Summit



# Happy 10th Anniversary Zabbix Japan!

May you continue the journey  
of success with pride!  
Wishing you happiness, and  
many more years of success!



# Challenges of the modern IT





# CIO-LEVEL VIEW

## Digital transformation

Management of legacy and existing systems

Mix of older and newer technologies and protocols

Transition to Hybrid Clouds, Microservices, K8S and OpenShift

## IT infrastructure management

Agile processes: DevOps, AIOps, CI/CD

## Preparing for emerging technologies

**Cybersecurity plays an increasingly important role**





# MONITORING CHALLENGES

## The Multiple Tools Problem

Missing Single Pane of glass

Lack of **centralized** visualisation and reporting

## Scalability and high availability

Growing number of devices, networks, increasing complexity

## Pro-active problem resolution is critical

Cost effectiveness



Zabbix is a **Universal** Open Source  
enterprise-level monitoring solution

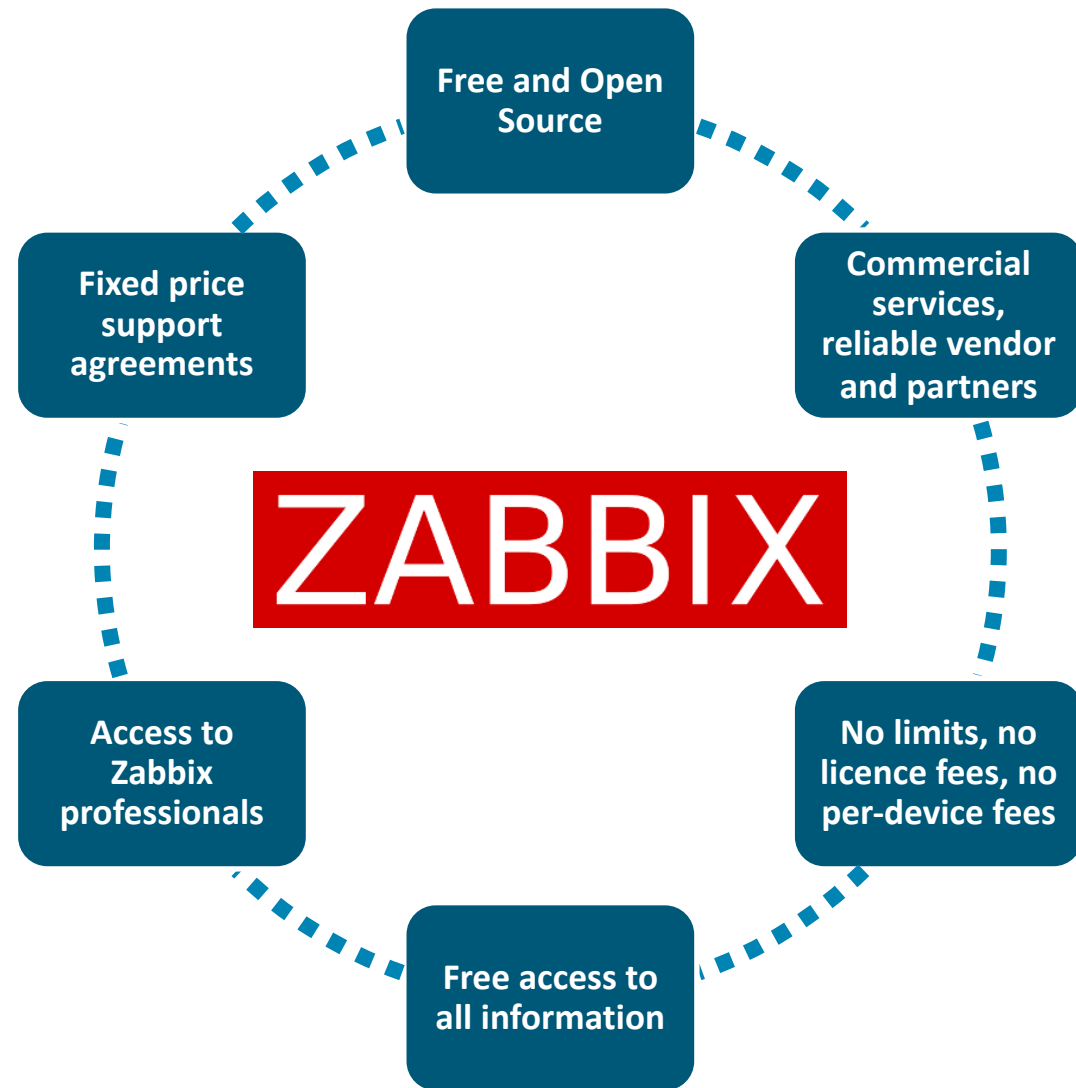


# All-in-one monitoring platform

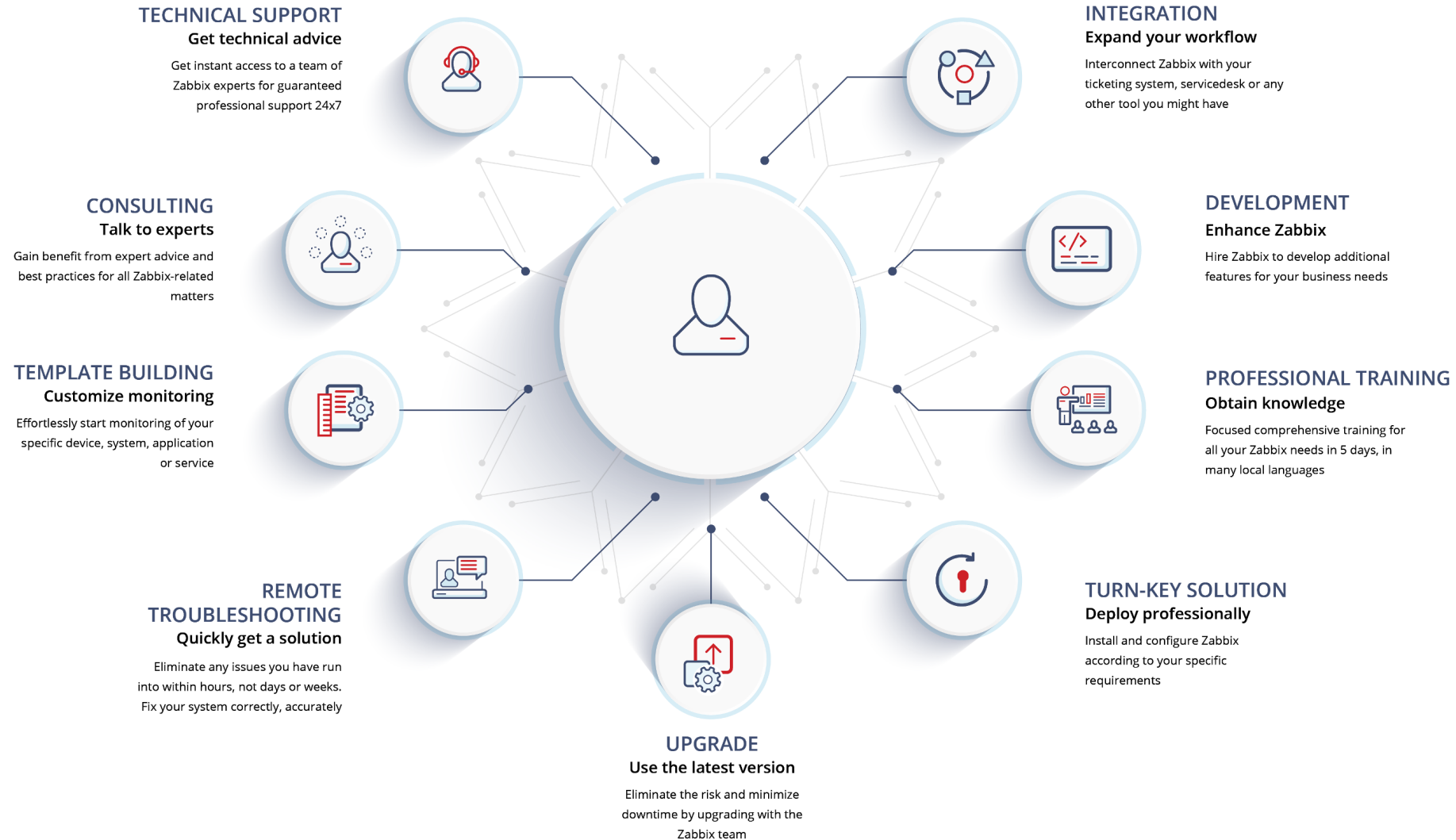
Everything included

# COST OF ZABBIX

Exceptionally low TCO



# YOU'RE COVERED: 24X7 PROFESSIONAL SERVICES



# TECHNICAL SUPPORT, **WORLDWIDE**

Silver	Gold	Platinum	Enterprise <span>Best Value</span>	Global I
<a href="#">Request a quote</a>	<a href="#">Request a quote</a>	<a href="#">Request a quote</a>	<a href="#">Request a quote</a>	<a href="#">Request a quote</a>
Monitored devices and metrics <b>Unlimited</b>	Monitored devices and metrics <b>Unlimited</b>	Monitored devices and metrics <b>Unlimited</b>	Monitored devices and metrics <b>Unlimited</b>	Monitored devices and metrics <b>Unlimited</b>
Phone call support <b>Included</b>	Phone call support <b>Included</b>	Phone call support <b>Included</b>	Phone call support <b>Included</b>	Phone call support <b>Included</b>
Number of incidents <b>8</b>	Number of incidents <b>Unlimited</b>	Number of incidents <b>Unlimited</b>	Number of incidents <b>Unlimited</b>	Number of incidents <b>Unlimited</b>
Support availability <b>8 x 5</b>	Support availability <b>8 x 5</b>	Support availability <b>24 x 7</b>	Support availability <b>24 x 7</b>	Support availability <b>24 x 7</b>
Initial response time <sup>?</sup> <b>1 days</b>	Initial response time <sup>?</sup> <b>4 hours</b>	Initial response time <sup>?</sup> <b>4 hours</b>	Initial response time <sup>?</sup> <b>4 hours</b>	Initial response time <sup>?</sup> <b>2 hours</b>
Emergency response time <b>Not available</b>	Emergency response time <b>Not available</b>	Emergency response time <b>90 minutes</b>	Emergency response time <b>90 minutes</b>	Emergency response time <b>60 minutes</b>
Support contacts <sup>?</sup> <b>1</b>	Support contacts <sup>?</sup> <b>2</b>	Support contacts <sup>?</sup> <b>3</b>	Support contacts <sup>?</sup> <b>7</b>	Support contacts <sup>?</sup> <b>20</b>
Supported Zabbix servers <sup>?</sup> <b>Priced per server</b>	Supported Zabbix servers <sup>?</sup> <b>Priced per server</b>	Supported Zabbix servers <sup>?</sup> <b>Priced per server</b>	Supported Zabbix servers <sup>?</sup> <b>Unlimited</b>	Supported Zabbix servers <sup>?</sup> <b>Unlimited</b>
Support for Zabbix Proxy <sup>?</sup> <b>Not available</b>	Support for Zabbix Proxy <sup>?</sup> <b>Priced per proxy</b>	Support for Zabbix Proxy <sup>?</sup> <b>Priced per proxy</b>	Support for Zabbix Proxy <sup>?</sup> <b>Unlimited</b>	Support for Zabbix Proxy <sup>?</sup> <b>Unlimited</b>
Legal entities covered <sup>?</sup> <b>1</b>	Legal entities covered <sup>?</sup> <b>1</b>	Legal entities covered <sup>?</sup> <b>1</b>	Legal entities covered <sup>?</sup> <b>1</b>	Legal entities covered <sup>?</sup> <b>5</b>



# BECOME ZABBIX CERTIFIED!

Training schedule ➤

# ATTEND ZABBIX TRAINING COURSES!

Apply now ➤



# AVAILABLE EXTRA TRAINING COURSES

## Automation and Integration with Zabbix API

The course is designed to provide a detailed and in-depth study of Zabbix API functionality - like import host groups, generate reports, or integrate with other systems.

1 day

Requirements  
No requirements

Price in EUR      Price in USD

€ 490

Apply for course

[Program description](#)

## Advanced Zabbix Data Pre-processing

The course will cover how to extract and transform information from different sources using Zabbix built-in functionality - without using external tools or scripts.

1 day

Requirements  
No requirements

Price in EUR      Price in USD

€ 490

Apply for course

[Program description](#)

## Advanced Zabbix Security Administration

The course will cover how to protect Zabbix internal communications and secure sensitive information like user credentials or encryption keys.

1 day

Requirements  
No requirements

Price in EUR      Price in USD

€ 490

Apply for course

[Program description](#)

## Advanced Problem and Anomaly Detection with Zabbix

The course is fully dedicated to problem detection, from creating simple triggers to using new long-term analytics functions.

1 day

Requirements  
No requirements

Price in EUR      Price in USD

€ 490

Apply for course

[Program description](#)

## 242 PARTNERS AROUND THE WORLD



104 of Fortune 500 Global use Zabbix



# ZABBIX SCALABILITY

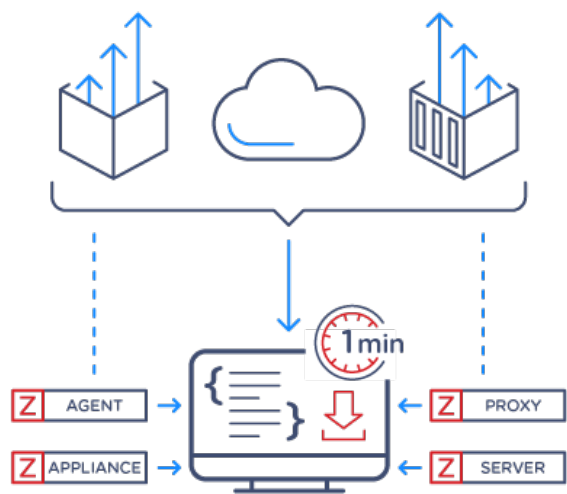


Single Zabbix server

550K+ of devices

30K+ proxies

10M+ items



# Deploy **anywhere**

## DEPLOY ON-PREMISE



## DEPLOY IN THE CLOUD



























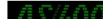











































































































# Monitor **anything**

Legacy and modern systems, **ready** for the future

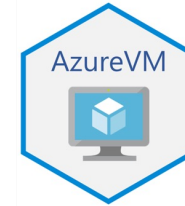


# OUT OF THE BOX MONITORING

 .NET	 1C: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](https://zabbix.com/integrations)

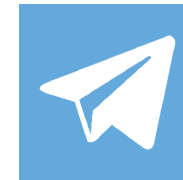
# RECENT ADDITIONS

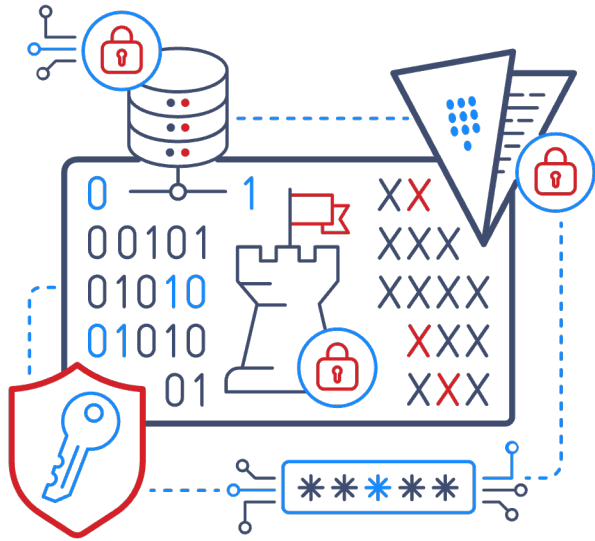


# CMDB AND TICKETING



# ALERTING

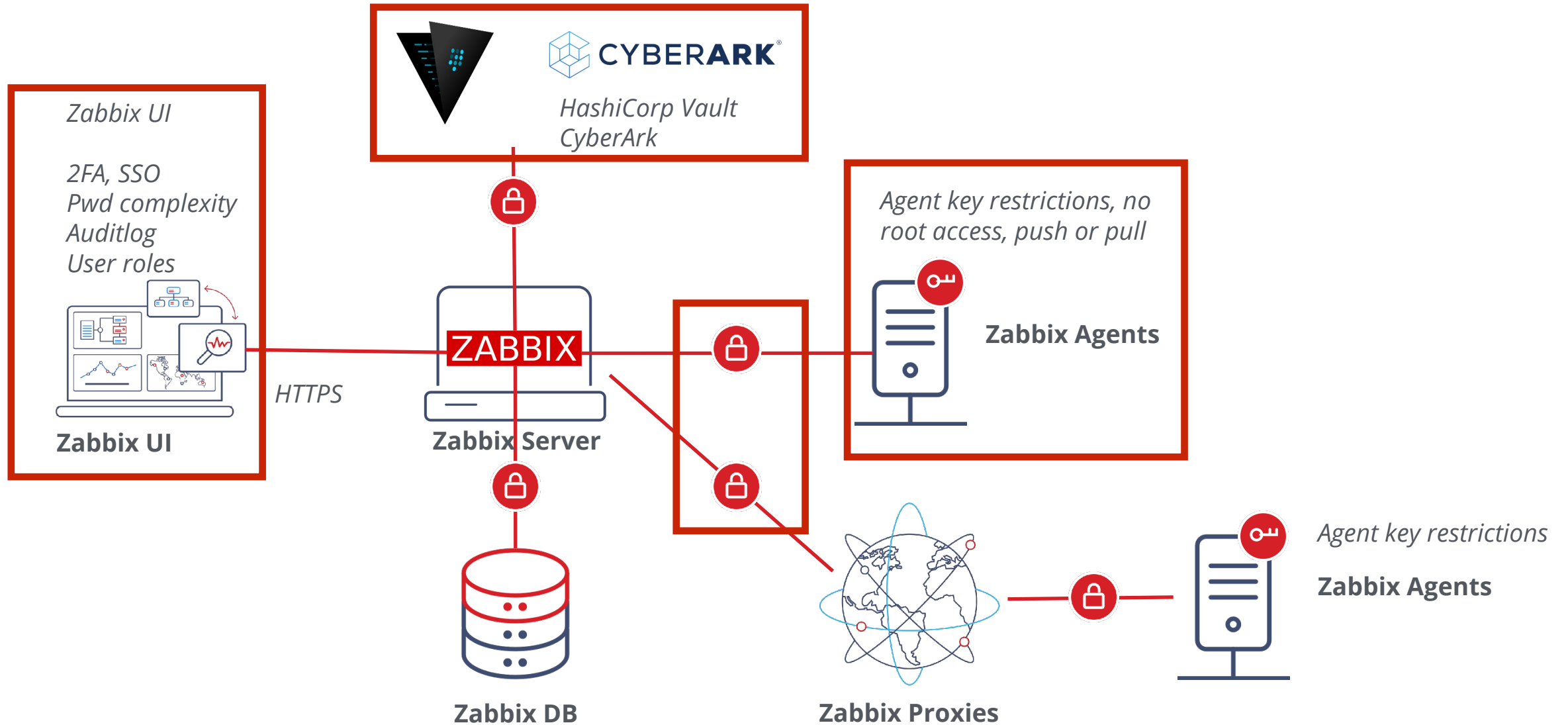




# Security **on all levels**

Highest security standards, verified by independent researchers

# SECURE BY DESIGN





Bug bounty

# ISO/IEC 27001

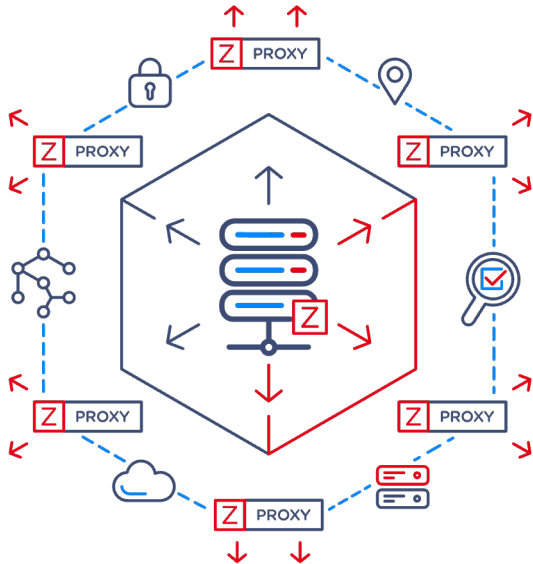
Accreditation in progress...

# Zabbix Security Advisories and CVE database

[How to report a security issue?](#)

Zabbix ID	CVE number	CVSS score	Zabbix severity	Synopsis	Component/s	Affected version/s	Published
<a href="#">ZBA-2022-07-1</a>	-	-		<a href="#">Zabbix products are not affected by CVE-2022-2068 vulnerability in OpenSSL</a>	-	-	2022 Jul 26
<a href="#">ZBV-2022-07-1</a>	CVE-2022-40626	4.8	Medium	<a href="#">Reflected XSS in action configuration window of Zabbix Frontend</a>	Frontend	6.0.0-6.0.6 6.2.0	2022 Jul 08
<a href="#">ZBV-2022-04-1</a>	CVE-2022-35229	3.7	Low	<a href="#">Reflected XSS in discovery page of Zabbix Frontend</a>	Frontend	=>4.0.0 5.0.0-5.0.24 6.0.0-6.0.4 6.2alpha1- 6.2beta3	2022 Apr 27
<a href="#">ZBV-2022-04-2</a>	CVE-2022-35230	3.7	Low	<a href="#">Reflected XSS in graphs page of Zabbix Frontend</a>	Frontend	=>4.0.23rc1 5.0.0-5.0.24	2022 Apr 27
<a href="#">ZBA-2022-04-1</a>	-	-		<a href="#">Zabbix products are not affected by vulnerabilities in Spring Framework (CVE-2022-22965 - Spring4Shell) and Spring Cloud Function (CVE-2022-22963)</a>	-	-	2022 Apr 04
<a href="#">ZBA-2022-03-1</a>	-	-		<a href="#">Zabbix products are not affected by CVE-2018-25032 vulnerability in zlib 1.2.11</a>	-	-	2022 Mar 28





# Solution for **MSPs**

Better QoS, additional revenue stream

# EARLY PROBLEM DETECTION, USEFUL INSIGHTS



**Baseline:** New user registrations is down 12% last week

**Anomaly:** Sudden anomaly detected in S3 usage

**Trend prediction:** Running out of EC2 instances next week

## Granular control of user permissions

## User roles

\* Name

Customers

User type

User

Access to UI elements

Monitoring

☒ Dashboard

☐ Overview

☐ Maps

☒ Problems

☐ Latest data

☐ Discovery

☐ Hosts

☐ Screens

☐ Services

Inventory

☐ Overview

☐ Hosts

Reports

☐ System information

☐ Audit

☐ Availability report

☐ Action log

☐ Triggers top 100

☐ Notifications

Configuration

☐ Host groups

☐ Maintenance

☐ Discovery

☐ Templates

☐ Actions

☐ Services

☐ Hosts

☐ Event correlation

Administration

☐ General

☐ User groups

☐ Media types

☐ Proxies

☐ User roles

☐ Scripts

☐ Authentication

☐ Users

☐ Queue

\* At least one UI element must be checked.

Default access to new UI elements☒

Access to modules

No enabled modules found.

Default access to new modules☒

Access to API

Enabled☒

API methods

Allow listDeny list

host.get✕item.get✕

type here to search

Select

Access to actions

☒ Create and edit dashboards and screens

## SCHEDULED PDF REPORTS

Can be applied to **any** dashboard

## Accessible to all users

## Use user roles to restrict access

## Daily, weekly, monthly or yearly

ZABBIX

[Dashboards](#)
[Monitoring](#)
[Services](#)
[Inventory](#)
[Reports](#)
[Data collection](#)
[Alerts](#)
[Users](#)
[Administration](#)

Scheduled reports

Show

All

Created by me

Status

Any

Enabled

Disabled

Expired

Apply

Reset

<input type="checkbox"/>	Name ▲	Owner	Repeats	Period	Last sent	Status	Info
<input type="checkbox"/>	Daily report	alex (Alexei)	Daily	Previous day	2022-09-01 09:00	Enabled	
<input type="checkbox"/>	Monthly management report	alex (Alexei)	Daily	Previous month	2022-10-03 09:00	Enabled	<div></div>
<input type="checkbox"/>	Weekly operational report	alex (Alexei)	Weekly	Previous day	Never	Enabled	

0 selected

Enable

Disable

Delete

Displaying 3 of 3 found

Support

Integrations

Help

User settings

Sign out

Zabbix 6.4.0beta2. © 2001–2022, Zabbix SIA

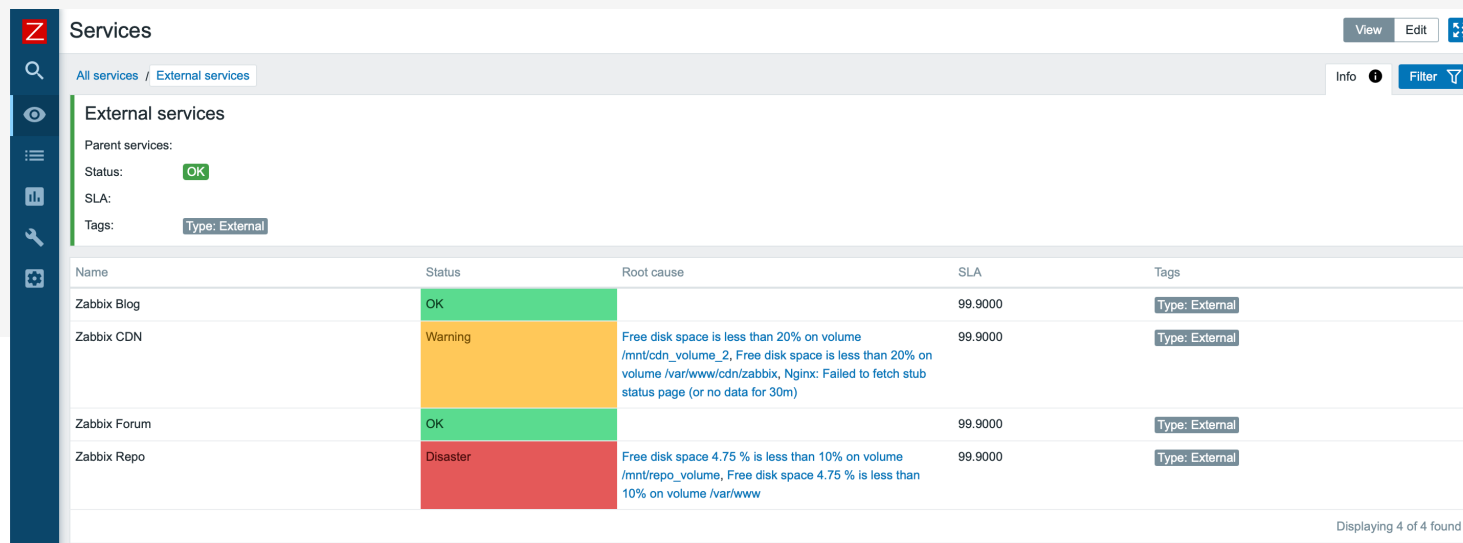
# BUSINESS SERVICE MONITORING (BSM)

Complex **SLO** definitions for **100K+** services

SLA real-time and scheduled reporting

Multi-tenancy using flexible user roles

Alerting, **root cause** and **impact analysis**



The screenshot shows the Zabbix Services interface. On the left is a sidebar with navigation icons. The main panel is titled 'Services' and has tabs for 'All services' and 'External services'. Below the tabs, there's a section for 'External services' with filters for 'Parent services', 'Status' (set to 'OK'), 'SLA', and 'Tags' (set to 'Type: External'). Below this is a table with 5 columns: Name, Status, Root cause, SLA, and Tags. The table lists four services: Zabbix Blog (OK), Zabbix CDN (Warning), Zabbix Forum (OK), and Zabbix Repo (Disaster). The 'Root cause' column contains detailed error messages for the Warning and Disaster status services. At the bottom right, it says 'Displaying 4 of 4 found'.

Name	Status	Root cause	SLA	Tags
Zabbix Blog	OK		99.9000	Type: External
Zabbix CDN	Warning	Free disk space is less than 20% on volume /mnt/cdn_volume_2, Free disk space is less than 20% on volume /var/www/cdn/zabbix, Nginx: Failed to fetch stub status page (or no data for 30m)	99.9000	Type: External
Zabbix Forum	OK		99.9000	Type: External
Zabbix Repo	Disaster	Free disk space 4.75 % is less than 10% on volume /mnt/repo_volume, Free disk space 4.75 % is less than 10% on volume /var/www	99.9000	Type: External



# MONITORING AS A REVENUE STREAM FOR MSP

Added-value service

Customer portal, a combination of

user roles for read-only access to dashboards and customized UI

re-branding options

SLA reporting

scheduled reports

Professional services tailored to MSPs



# ZABBIX FEATURES

All benefits of Zabbix in one place

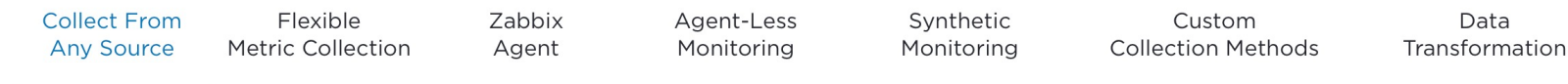
Use as a reference

Answers many FAQs

[zabbix.com/features](https://zabbix.com/features)



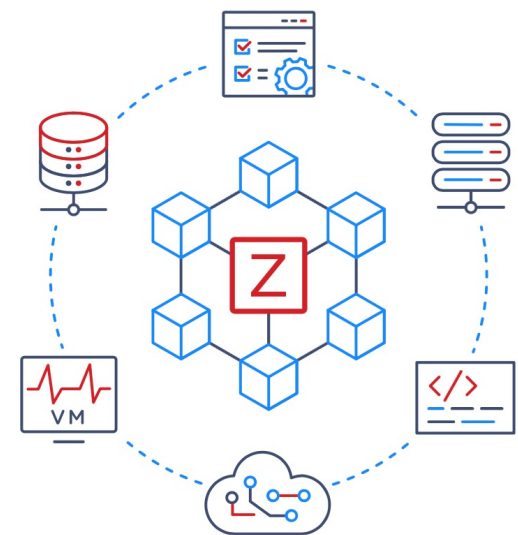
Keep control of your infrastructure by collecting  
any metric from any source



## Collect metrics from any source

Zabbix enables you to collect metrics but isn't limited to:

- ✓ Network devices
- ✓ Cloud services, containers, virtual machines
- ✓ OS level monitoring
- ✓ Log files
- ✓ Databases
- ✓ Applications
- ✓ Services
- ✓ IoT sensors
- ✓ Web page monitoring
- ✓ HTTP/HTTPS endpoint monitoring
- ✓ Support for full range of industry standard protocols
- ✓ Collect data from external API end-points







# What's next?

Thinking about the future of Zabbix

# ZABBIX ROADMAP

It is always a **compromise**, a balance of:

- Strategic functionality

- ZBXNEXT** popular and less popular feature requests

- Paid development

- Backlog issues



# Main vectors

More value for the enterprise

**General usability:** UX and UI, ease of use

**Cloud** monitoring, visualization and reporting

Event and problem handling and processing

**Extending scope of monitoring:** compliance monitoring, APM, IoT, advanced log monitoring, public and hybrid cloud monitoring

**Extendability** on all levels: pluggable storage engines, agent plugins+UI modules+3rd party widgets, webhooks

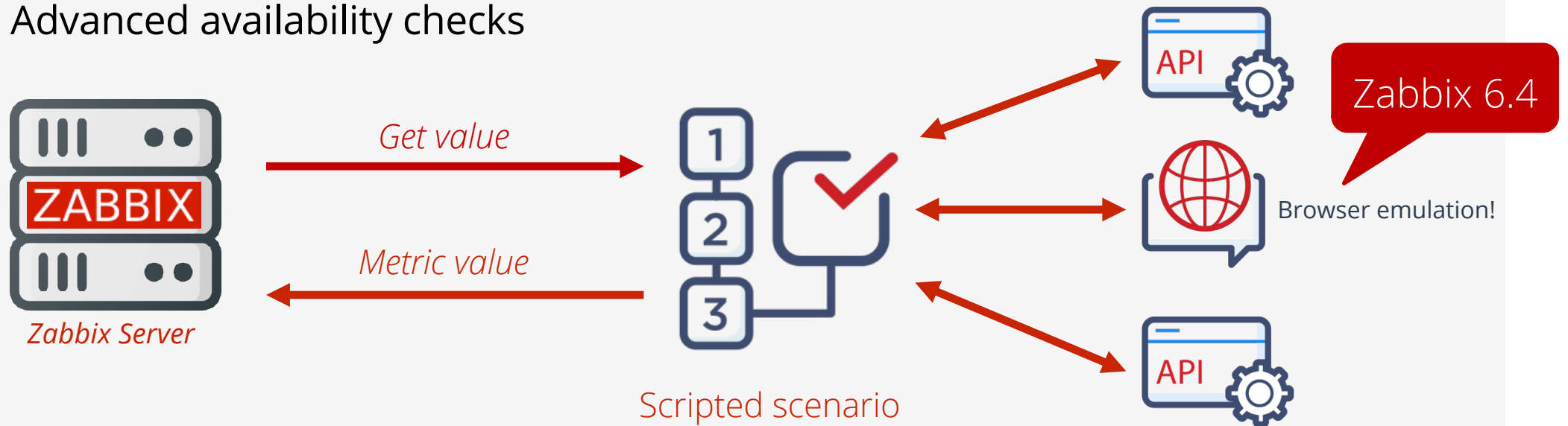
HA, scalability and load balancing

# ADVANCED SYNTHETIC MONITORING

Complex interaction with Cloud APIs over HTTPS: AWS, Azure, GCP

Multi-step scripted data collection

Advanced availability checks



# ZERO-DOWNTIME UPGRADE OF PROXIES

Zabbix 6.4

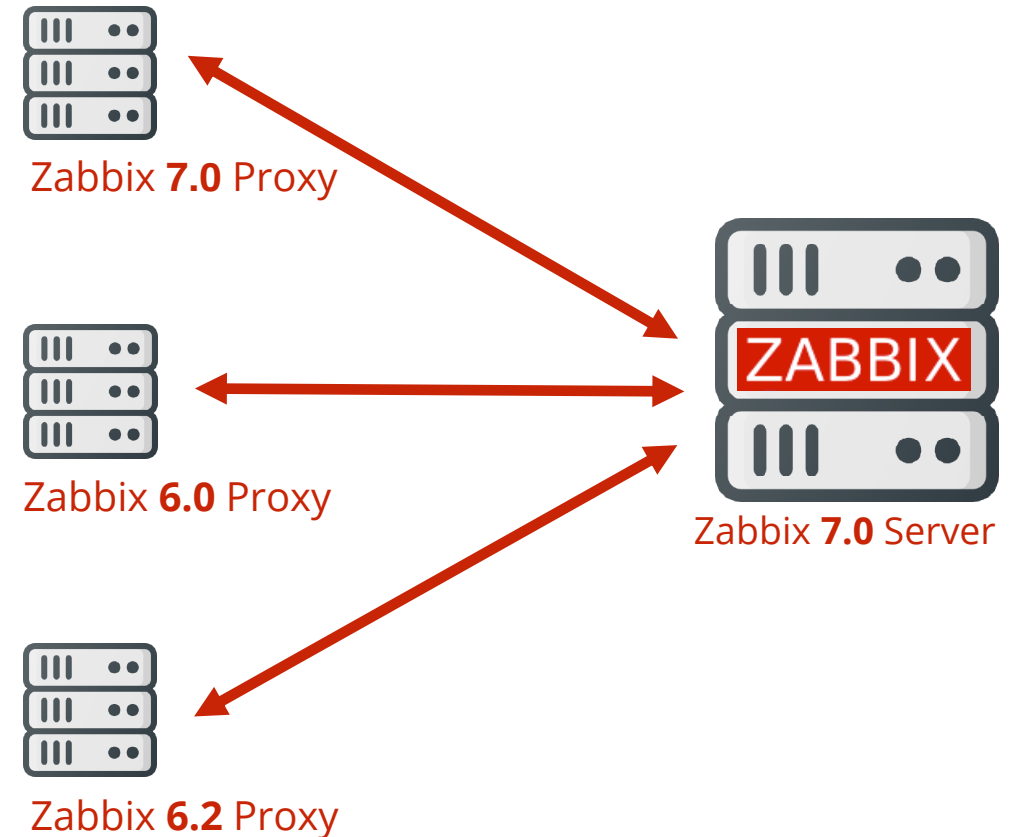
## Now:

All Zabbix components (except agents) must be upgraded simultaneously

## Zabbix 6.4:

Older proxies will **continue to process data**

Creates a longer **time window** for upgrade



# THE CONCEPT OF CAUSE AND SYMPTOM EVENTS

Zabbix 6.4

	Time	Severity	Recovery time	Status	Info	Host	Problem	Duration	Ack	Actions	Tags
<input type="checkbox"/>	2022-09-09 07:44:56	Warning		PROBLEM		Zabbix server	High swap space usage (less than 50% free)	11d 4h 53m	No		class: os component: memory component: storage ...
<input type="checkbox"/>	2022-09-07 15:26:10	Average		PROBLEM		Apache	Interface eno1: Link down	11d 23h 12m	No		
<input checked="" type="checkbox"/>	2022-09-07 15:26:06	Average		PROBLEM		Apache	Service is down	11d 23h 38m	No		
<input checked="" type="checkbox"/>	2022-09-07 15:26:06	Average		PROBLEM		Apache	Failed to fetch status page	11d 23h 38m	No		
<input type="checkbox"/>	2022-09-09 07:44:50	Information		PROBLEM		Zabbix server	System name has changed	10d 7h 23m	No		class: os component: memory component: storage ...

2 selected

Mass update

VIEW

Problems

CONFIGURATION

Trigger

Items

PROBLEM

Mark as cause

Mark selected as symptoms

LINKS

Trigger URL

Displaying 5 of 5 found

	Time	Severity	Recovery time	Status	Info	Host	Problem	Duration	Ack	Actions	Tags
<input type="checkbox"/>	2022-09-09 07:44:56	Warning		PROBLEM		Zabbix server	High swap space usage (less than 50% free)	10d 7h 23m	No		class: os component: memory component: storage ...
<input checked="" type="checkbox"/>	2022-09-07 15:26:10	Average		PROBLEM		Apache	Interface eno1: Link down	11d 23h 42m	No		
<input checked="" type="checkbox"/>	2022-09-07 15:26:06	Average		PROBLEM		Apache	Service is down	11d 23h 38m	No		
<input checked="" type="checkbox"/>	2022-09-07 15:26:06	Average		PROBLEM		Apache	Failed to fetch status page	11d 23h 38m	No		
<input checked="" type="checkbox"/>	2022-09-07 15:26:06	Average		PROBLEM		Apache	Service is down	11d 23h 38m	No		
<input checked="" type="checkbox"/>	2022-09-07 15:26:06	Average		PROBLEM		Apache	Failed to fetch status page	11d 23h 38m	No		
<input type="checkbox"/>	2022-09-09 07:44:56	Information		PROBLEM		Zabbix server	System name has changed	10d 7h 23m	No		class: os component: memory component: storage ...

Displaying 5 of 5 found

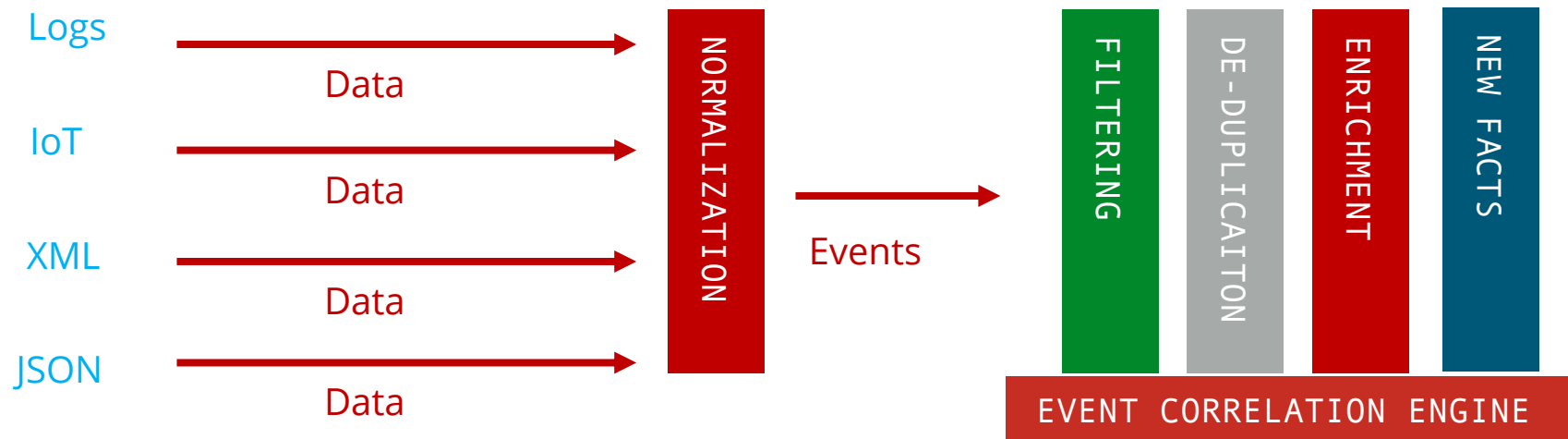
# ADVANCED EVENT CORRELATION

Tag based event pre-processing and correlation

Event filtering, de-duplication, enrichment

Normalization and noise reduction

Generation of new facts



Zabbix events





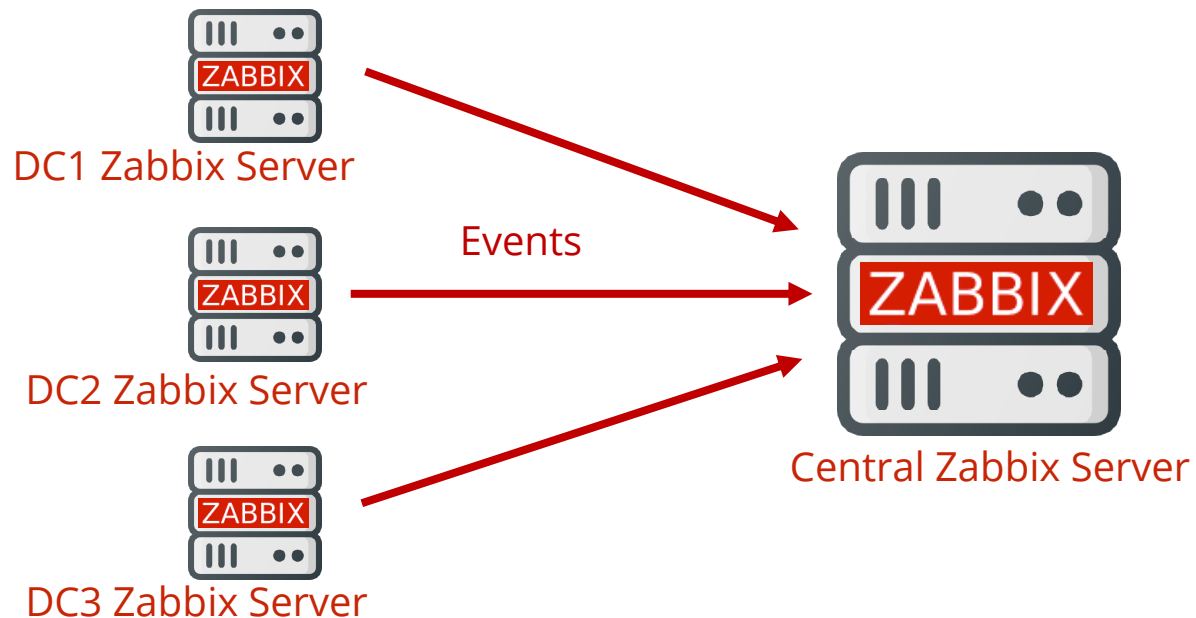
# MULTI DC MONITORING

Zabbix 7.0 LTS

Centralized event processing

Centralized dashboards

Getting events from multiple Zabbix Servers



## Single Pane of Glass



# NEW VISUALIZATION CAPABILITIES

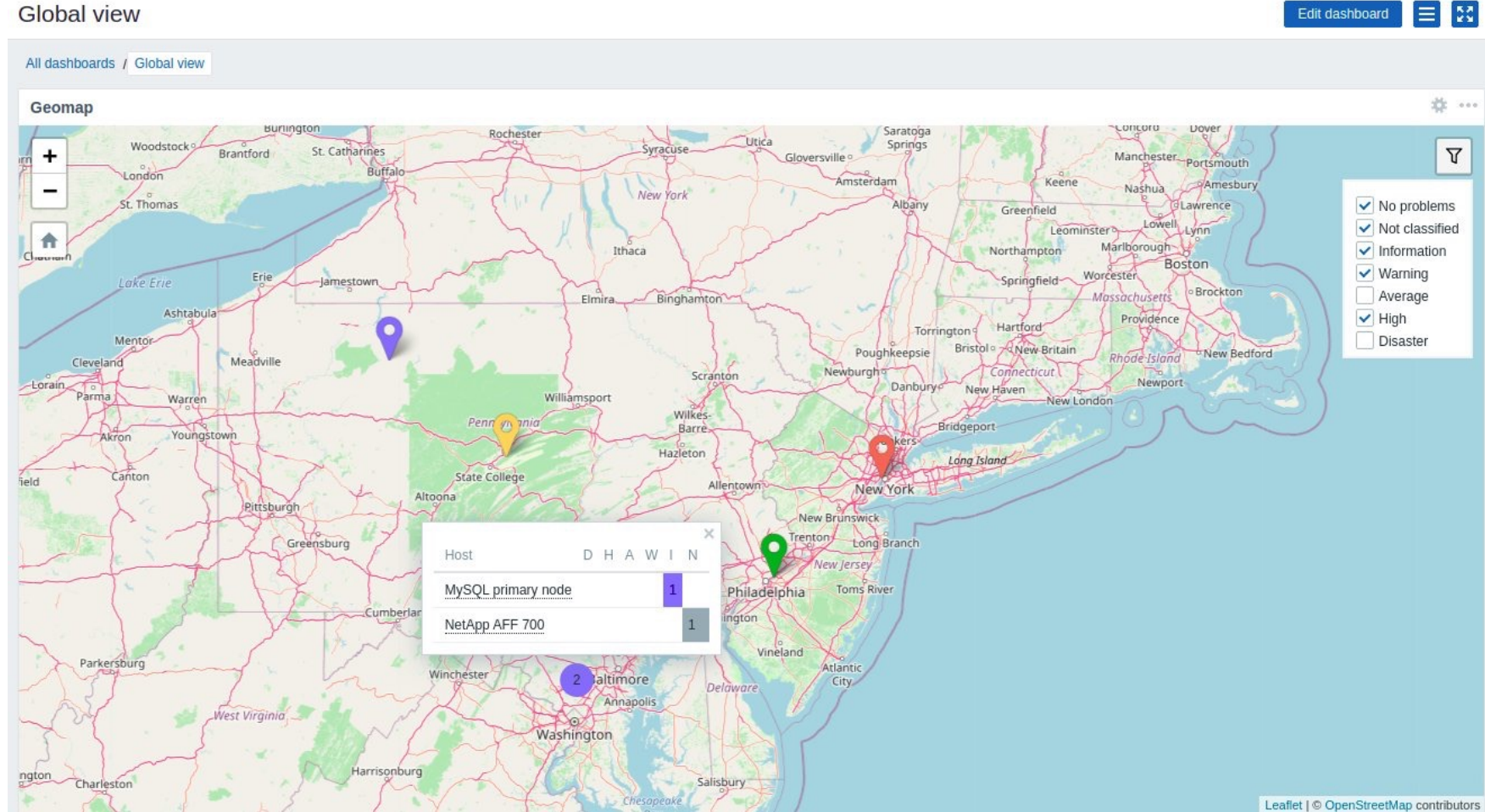
New set of widgets

Host-level TopN reporting

More host-level widgets

Visualization of Cloud & K8S

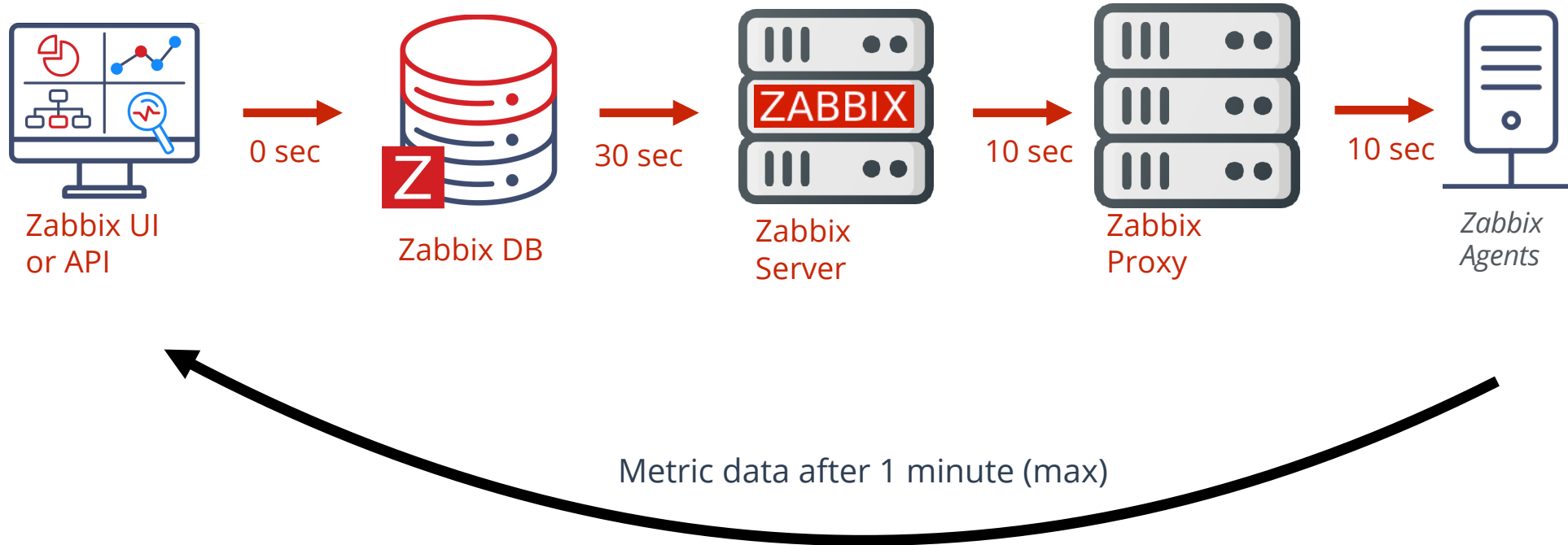
Framework for widget devs



# INSTANT CONFIGURATION UPDATE

Configuration sync will support **incremental updates**

New items are now checked **within a minute** after creation



# JIT USER PROVISIONING

Zabbix 6.4

10<sup>TH</sup> ZABBIX SUMMIT / 2022

Automatic user provisioning

Auto-creation of users for **LDAP** and **SAML**

Management of users and their rights outside of Zabbix

Automatic mapping of user rights to user groups



# ZABBIX 7.0 LTS ROADMAP IN A NUTSHELL

Cloud & K8S monitoring and visualization

Event correlation engine

Simplified upgrade of proxies

JIT user provisioning for AD/LDAP/SAML

Receiving events from outside

Advanced visualization

End-user synthetic monitoring

Enterprise alarm console

Massive usability improvements

Security and compliance monitoring

Framework for new widgets

New templates and integrations

## LATER

**Observability:** APM + tracing, Open Telemetry integration

Cloud native: HA, performance and scalability

Log management



# Roadmap

This page contains an incomplete list of planned functionality that can be updated anytime without prior notice

Zabbix 6.4

Zabbix 7.0 LTS

Zabbix 7.2

Zabbix 7.4

Zabbix 8.0 LTS

## Event correlation and enterprise alarm console

- Cause and Symptom types of events **In dev**  
Including ability of displaying number of symptom events for each cause event in the problem view  
[ZBXNEXT-7964](#)
- Advanced event correlation rules **In design**  
Support of complex rules for event normalization, filtering, de-duplication and aggregation
- Problem view optimised for faster problem resolution and collaborative work **In design**  
Ability to control order, width and visibility of columns in the problem view  
[ZBXNEXT-850](#)

## Security related improvements

- JIT user provisioning **In dev**  
Support automatic user creation after successful AD, LDAP, or SAML authentication. It will allow remote management of users and their permissions  
[ZBXNEXT-276](#) ★ Top voted!
- Audit log for all user and API operations **In dev**  
[ZBXNEXT-2815](#), [ZBXNEXT-6470](#) ★ Top voted!

## End-user Web monitoring

- Support of complex scenarios for monitoring of Web applications and services **In design**

## High availability, performance and scalability

- Instant update of configuration changes **Ready**  
All configuration changes will be immediately pushed to all proxies and agents, also more efficient delivery of configuration data  
[ZBXNEXT-3290](#), [ZBXNEXT-7852](#) ★ Top voted!
- Faster SNMP data collection and discovery **In dev**  
Performance optimized SNMP data collection and discovery  
[ZBXNEXT-4428](#) ★ Top voted!

## Status

New

In design

In dev

Ready

# Zabbix Community

We love what You do!







THANK YOU!

